EDUCATING IMMIGRANT CHILDREN IN THE UNITED STATES: A MIXED METHODS ANALYSIS OF ACHIEVEMENT OF HISPANIC STUDENTS IN PENNSYLVANIA

by

Mónica Liliana Jacobo Suárez

B.A. Political Science and International Relations, Center for Research and Teaching in Economics, 2004

Specialization in Applied Statistics, IIMAS-UNAM, 2006

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This dissertation was presented

by

Mónica Liliana Jacobo Suárez

It was defended on

April 4, 2013

and approved by

Dr. Louise Comfort, Professor, GSPIA

Dr. John Mendeloff, Professor, GSPIA

Dr. Feifei Ye, Faculty, Department of Psychology in Education

Dr. Richard G. Tucker, Faculty, Department of Modern Languages, CMU

Dissertation Advisor: Muge Finkel, Assistant Professor, GSPIA

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The education of immigrant students in the U.S., especially those of Hispanic origin, poses an important challenge to education policy because: i) there is a considerable achievement gap between Hispanic students and White students; ii) Hispanic students are over-represented within the English language learner population; and iii) Hispanic students remain more likely than other immigrant students to come from disadvantaged families. This dissertation identifies the necessary determinants of achievement for Hispanic students while systematically illustrating a number of public policy challenges that constraint educators in Pennsylvania, a state experiencing a recent and a rapid surge of Hispanic immigrants. It specifically asks: What are the effects of student background characteristics and school attributes on individual performance of Hispanic students? What are the main challenges that schools encounter when serving this population? And, what policy recommendations could contribute to enhance the achievement of Hispanic students? To answer these questions satisfactorily, it draws on literatures and methods from three scholarships: Education, Applied Linguistics, and Sociology of Immigration. It utilizes case studies and applies Hierarchical Linear Modeling to a state representative sample of students who took the Pennsylvania System of School Achievement test during 2009, 2010, and 2011.

Findings suggest that student background characteristics significantly predict achievement among Hispanic students and their effect is larger than those of school attributes.

The major challenges that schools face in relation to teaching Hispanic students include the English language barrier, a poor academic background knowledge, and low parental involvement. Three strategies showed to be highly effective to address these challenges: constant monitoring of student's achievement; use of achievement data to inform instructional decisions and tailor interventions to individual students' needs; and the existence of ESL certified teachers and bilingual school staff. Based on these findings, policy recommendations are offered at the school and district level.

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PREFACE

This dissertation emerged from my research during my coursework at the University of Pittsburgh's Graduate School of Public and International Affairs, my involvement with diverse local organizations serving disadvantaged members of the Latino community, and my own immigrant experience as international student. In particular, my research on language, bilingual education, and second language acquisition exposed me to a new and enthralling scholarship and contributed a great deal to define my dissertation topic. The study of educational achievement among second language learners, specifically Hispanic immigrants, has fascinating me since then. I thank Prof. Muge Finkel for her unconditional support and wise advice throughout each stage of this dissertation. I'm also very grateful for helping me to keep my "developmental lenses" on and look at the great picture in every single piece I wrote.

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1.0 INTRODUCTION

With nearly 40 million people, or 13 percent of its total population, being foreign born the United States is one of the countries where the discussions on immigration have had both a constant presence and a high profile. Education is among the policy areas that best reflects this unsettled debate between the pros and cons of growing numbers of immigrants. By 2005, immigrant children and U.S.-born children of immigrants exceeded 30 million, or 1 in every 5 students attending elementary and secondary schools, with expectations of continuous growth (Capps et al., 2005; Hemprill & Vanneman, 2011; Gandara & Hopkins, 2010; Portes & Fernandez-Kelly, 2008). From a policy perspective, education of immigrant students remains challenging because most of these students enter school with a poor command of the English language and show lower levels of academic achievement when compared with other students (Batalova, Fix & Murray, 2007). In turn, such low educational achievements are likely to significantly constrain immigrant children's opportunities for upward mobility in the future.

Within the larger immigrant student population in the U.S., Hispanic-origin students stand out as a group for a number of reasons: they are the largest and fastest growing group among immigrants; they account for 80 percent of the students who lack English proficiency, potentially impeding their future achievements; they have comparatively high dropout rates and lower achievement scores in standardized tests; a majority of them come from economically disadvantaged backgrounds; and, increasingly Hispanic migrants have been moving into states

with no previous Hispanic and/or migrant populations at all. All of these factors, individually and combined, are challenging the capacities of existing educational programs in traditionally immigrant-receiving destinations, while demanding new resources in states where migration has been a recent phenomenon. Consequently, it has become imperative for the sake of effective education policy that we understand the conditions under which immigrant students access information more efficiently, achieve better educational outcomes, and thus increase their long term chances to contribute to the larger society of which they are now a part of.

1.1 SIGNIFICANCE OF THE STUDY

Strategies to provide effective schooling for language minority students have not been studied or researched extensively. The majority of the literature on education has focused on comparing the effectiveness of English language programs in teaching Hispanic minority students, with bilingual education and English immersion programs being the most commonly referred ways. Nevertheless, Hispanic students face educational and non-educational challenges beyond their language needs, a situation that urges us to comprehensively assess current educational practices aimed to this group. This dissertation thus seeks to address three important gaps in the literature: first, few studies analyze the effects of student background and school characteristics on individual performance in a systematic way. Because school achievement is a complex phenomenon affected by several and often times intertwined factors (e.g. socioeconomic status, parents' education, student's previous schooling, etc.), identifying the impact of each factor has been at best a difficult task. To address this issue, the dissertation draws on Hierarchical Linear

Models and examines the effects that student background characteristics and school attributes have on school performance in isolation.

Secondly, very few studies of school effectiveness have utilized actual performance data in their assessments, while a large majority has depended mostly on case studies. This is to some extent explained by the fact that access to scores from standardized tests, which are the conventional measures of student achievement, is restricted. However, given the added value of methodological plurality to assess the validity of achievement findings, this dissertation adopts a mixed method approach. In the quantitative part, it applies Hierarchical Linear Models to a data set comprised of 6,000 students who took the Pennsylvania System of School Assessment (PSSA) in the years 2009, 2010 and 2011. In the qualitative part of the analysis, it utilizes case studies to analyze the implementation of education programs in four schools located in a district with a high density of Hispanic students.

Thirdly, a great deal of the research on Hispanic achievement focuses on states and cities that have historically received considerable immigration flows, such as Texas, California, and New York. Only a few studies examine the policy challenges the recently migrant receiving states are trying to address. During the last decade, the demographic landscape of the U.S. has dramatically changed. Not only there are more immigrants now than at any other point in history, but also they are populating new states and smaller cities in the Southwest and Midwest. This research focuses on the education policies in one such state, Pennsylvania, experiencing a recent, rapid, and uneven surge of Hispanic immigrants. As such, it aims to contribute to the literature on Hispanic student achievement in new U.S. destinations.

1.2 RESEARCH QUESTIONS

The overall goal of this dissertation is to expand our current understanding of effective education opportunities aimed at Hispanic minority students in states with recently changing demographics, and hence, to inform educational policy debate nationwide. It seeks to identify the necessary determinants of achievement for Hispanic students while systematically illustrating a number of public policy challenges that constrain educators in Pennsylvania. It specifically asks three questions:

i. What are the effects of student background characteristics and school attributes on individual performance of Hispanic students in Pennsylvania's public elementary schools?

ii. What are the challenges that schools and families encounter when trying to provide effective schooling to this population?

What educational strategies, practices, and policies can be recommended to enhance the educational achievement of Hispanic students?

1.3 HISPANIC STUDENTS IN PENNSYLVANIA

To answer these questions, the dissertation studies the education policies and achievement scores of Hispanic students in the public school system in Pennsylvania. During the last decade Pennsylvania has experienced a significant increase in its Hispanic population and a matching increase of Hispanic students among its K-12 student population. Although Hispanics represented only 6 percent of the total state population by 2010, they grew 83 percent with

regard to a decade earlier.[1] The increase of Hispanic population has been more dramatic in some counties, such as 597% increase in Forest County, 480% increase in Luzerne County, and 305% increase in Clearfield County.[2] This demographic change also reflects on the composition of the student body. According to the Pennsylvania Department of Education, Hispanic students increased by 37 percent among the K-12 population from 2001 to 2006. Although Hispanics represent only 5 percent of the statewide student population, they are now the majority immigrant group in various middle to large-size districts. This is particularly the case in Reading and Lancaster districts and the state capital of Harrisburg, with their respective Hispanic student enrolments being 77%, 56% and 21% in 2011.

Given the speed of this significant demographic change, Pennsylvania faces an urgent need to develop educational resources rapidly and more effectively. Similar to national trends, Hispanic students in Pennsylvania perform more poorly than any other racial group. During the 2010-2011, 22% of the Hispanic students performed below basic level in mathematics compared to only 8% of Whites and 4% of Asians that did so. Only African-Americans performed similarly to Hispanics, with 23% of this group scoring below basic in math. When tested in reading, 26% Hispanics scored below basic, while only 7% of Asians and 10% of Whites did so. Furthermore, Hispanics show the lowest graduation rate among all racial groups: 76% compared to 84% among African-Americans and 94% among White and Asian students.[3] Given the rapid surge of Hispanics and their poor performance, examining educational programs that serve this population is an ever urgent concern for the State of Pennsylvania.

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[1] Data on enrollmentin public schools by local education authority provided by the Pennsylvania Department of Education.
[2] U.S. Census Population counts for 2000 and 2010 analyzed by the Pew Hispanic Center. Data on all Pennsylvania counties is presented in Appendix 4.
[3] Pennsylvania Report Card, PDE, 2011

This dissertation is organized as follows: the second chapter presents the theoretical foundations and reviews hypotheses from the academic disciplines of Education, Applied Linguistics, and Sociology of Immigration as they develop expectations for educational attainment among Hispanic children. Chapter three provides a brief historical background of immigration in the U.S. and sets the general context in which educational policy towards Hispanic immigrants is taking shape in Pennsylvania. The fourth chapter defines the methodological framework utilized to address the research questions and methods of data collection and analysis used in the qualitative and quantitative analyses. The quantitative analysis investigating student and school determinants of achievement of Hispanics in Pennsylvania elementary schools is presented in chapter five. Chapter six complements this analysis by examining the implementation of education programs in the Reading school district. Through four case studies, this chapter identifies additional achievement determinants, and systematically illustrates practical challenges that constrain educators. Chapter six also highlights successful practices in the field and the strategies that schools have used to enhance academic achievement of Hispanic students. The final chapter, chapter seven, integrates the main findings from the qualitative and quantitative analyses. It discusses major determinants of achievement and challenges to improve achievement of Hispanic students specifically in the state of Pennsylvania, but its findings remain informative for all new immigrant destination states. Then, this chapter concludes with a series of policy recommendations to provide effective schooling to Hispanic students, both at the school and the district level of implementation.

2.0 LITERATURE REVIEW

2.1 HISPANIC CHILDREN IN AN IMMIGRANT NATION

In few countries has immigration played such a central role in national life as it has in the United States. Not only was immigration decisive for its foundation as a nation during the eighteenth century but also immigrants constituted a major source of population growth during the nineteenth and twentieth centuries. Today immigration policy occupies a salient place in American politics and immigration flows have acquired a new vigor during the last three decades exceeding by far the numbers experienced before. In 1980, the foreign born population totaled 14.1 million, or 6.2 percent of the national total; by 1990, it had grown to 19.8 million (7.9 percent); by 2000, to 31.1 million (11.1 percent); to nearly 40 million in 2010 (13 percent) (U.S. Census Bureau). Never before has the United States received immigrants from so many countries, from such different economic backgrounds and for so many reasons (Portes & Rumbaut, 2006). Despite this diversity, recent immigration has a distinctive Latin American face.

According to the latest decennial census the foreign born population from Latin America constitutes the largest region-of-birth group, accounting for over a half of all foreign-born (53 percent or 21.1 million). By 2010, 50.5 million people residing in the United States were of

Hispanic or Latino[4] origin (16 percent of the total population); this number includes both foreign-born and U.S born Hispanics. The Hispanic population increased from 35.3 million in 2000, when this group made up to 13 percent of the total population. Indeed, the majority of the growth in the U.S. total population comes from increases in those who reported their ethnicity as Hispanic or Latino (Ennis, Rios-Vargas & Albert, 2010). During the last decade, Hispanics increased by 57.9 percent in contrast to the 13.2 percent increase of the overall national population (Portes, 2006). Although important differences exist by country of origin, research shows that a vast majority of the Hispanic population are manual workers, come to America with relatively little human capital, and often times face negative racial stereotypes that impede their integration into society (Portes & Rumbaut, 2001; Bergar & Klein, 2010; Portes & Rivas, 2011).

While sheer numbers and the rates of growth are impressive, the dynamics of immigration and adaptation do not take place in a vacuum. Among the most important social consequences of this large immigrant flow are the reconstitution of families divided by migration and the procreation of a new generation. Today, immigrant children and U.S.-born children of immigrants exceed 30 million or 1 in every 5 students attending American schools (Jensen & Chitose, 1994; Jensen, 2001, Portes & Fernandez-Kelly, 2008). While the general population is aging, immigrants under 18 years of age are the fastest growing segment of the nation's population. This new demographic composition poses important challenges to different areas of public policy, particularly in the education field. Unlike their parents, children of immigrants will

[4] In 1997, the Office of Management and Budget (OMB) issued a Federal Register Notice regarding revisions to the classification of federal data on race and ethnicity. Among the changes, the term "Hispanic" was changed to "Hispanic or Latino" and used by first time in the 2000 Census. The Census Bureau defines "Hispanic or Latino" as "a person of Cuban, Mexican, Puerto Rican, South or Central American or other Spanish culture or origin regardless of race. For this research, the term Hispanic is preferred over Latino for having a more neutral connotation. Hispanic origin can be viewed as the heritage, nationality group, lineage, or country of birth of the person or the person's parent before their arrival in the United States. People who identify their origin as Hispanic, Latino or Spanish may be of any race. See Ennis, Rios-Vargas, and Albert, 2010.

be educated in the host society and become full-fledged members of it. Hence, educating these new citizens becomes a major policy concern; their destiny as they reach adulthood and seek to integrate socially and economically will greatly depend on their academic attainment and the likelihood of graduating versus dropping out of school (Portes & Rivas, 2011).

Among all immigrant youth, Hispanic students pose a particular challenge to education policy for various reasons. They constitute the biggest group and the one that depicts the lowest performance when compared to any other minority group in all measures of educational attainment (Rumberger & Tran, 2008, 2009; Aud, Fox, & KewalRamani, 2010; Berger & Klein, 2010). Several factors may explain the underachievement cycle among Hispanics. Latino or Hispanic families are more likely than any other minority group to be economically distressed, be single-headed, lack access to quality day care, and have few books at home, all circumstances associated with below average academic performance (Aud, Foz, & KewalRamani, 2010; Lopez, 2009). Also, Hispanic families tend to settle in highly segregated and impoverished settings which make Hispanic children more likely to attend schools with fewer resources and institutional anomie (Suarez-Orozco, 2008, 2010). In addition to these factors, lack of proficiency in English, a situation more commonly found among Hispanic immigrant children, poses additional challenges to their academic success. Not only do students need to learn content while learning a new language but also schools require additional educational resources to teach these students. While poverty and lack of English proficiency can reduce the chances a child has to succeed in American schools, causality is complex and never unidirectional. Indeed, poor academic attainment is likely to reduce the chances immigrant youth have to progress culturally and socially. The decisive role of education to lead to professional opportunities resides in that only those able to continue their educational trajectory and obtain a college degree could make

true their American dream (Portes, 2006). Hence, enhancing achievement of Hispanic children is not only an educational concern but also a development issue.

This chapter sets the theoretical foundation to discuss educational attainment among Hispanic children in the United States. The following three sections summarize research from the fields of Education, Sociology of Immigration, and Language Education Policy and Planning.

2.2 EDUCATION: STUDIES ON SCHOOL EFFECTIVENESS

In order to discuss the possible determinants of achievement among Hispanics it is necessary to examine the factors that may influence achievement of any type of student. Hundreds of studies on school effectiveness have examined the effects that schools may have on student achievement. In general, empirical evidence suggests that three factors -socioeconomic status, segregation, and school size- have consistent and sizeable impacts on student achievement. The relationship that each of these factors plays in student achievement is discussed below.

2.2.1 Socioeconomic background

The most consistent finding across multiple studies on school effectiveness is that the proportion of students living in poverty in a specific school is by far the greatest predictor of individual achievement and school climate (Stevenson, 2006). Beginning with the influential "Coleman report", a nation-wide study on equality of educational opportunity, hundreds of studies on student achievement have documented a strong and inverse relationship between a student's individual achievement and his socioeconomic background. Coleman et al. (1966) began this

debate by concluding that schools have relatively little impact on student achievement compared to the socioeconomic background of the students who attend them. When socioeconomic factors are statistically controlled for, the differences between schools account for only a small fraction of differences in pupil achievement. Indeed, Coleman found that variability between individual student achievement within the same school is roughly four times as large as the variability found among schools (Coleman et al, 1966, pp. 21-23). These results provided the first consistent evidence that poverty, measured as socioeconomic background, bears a strong and negative relation to academic achievement. This relationship has been supported by more recent studies (Rumberger & Palardy 2005; Sirin, 2005).

Even though schools have a relatively small impact on student achievement when compared to socioeconomic factors, Coleman found that this effect differs among different racial groups. The average achievement of white students seems to be less affected by the school resources (the strength or weakness of this school's facilities, curricula, and teachers) than the average achievement of minority students. In other words, the achievement of minority students depends more on the schools they attend than does the achievement of white students (Coleman et al, 1966, p. 21). A direct implication is that improving the school of a minority student may increase his individual achievement more than improving the school of a white child would improve his achievement. Therefore, investments in curriculum, teachers, after school programs and improving school facilities may contribute more to improving achievement in schools with high portions of minority students than they would in mostly white schools. Similarly, the average minority student's achievement may suffer more in a low quality and understaffed school than might the average white's student performance.

2.2.2 Income and ethnic/race segregation

Ever since the influential Coleman Report, education scholars have continued researching the ways in which school context affects the academic performance of children both directly and in interaction with individual predictors. Educational researchers have identified school composition as one of the key areas responsible for schools' differences in overall academic success and rates of dropout. School compositional effects constitute the aggregate influence of school peers on a student's school experience, above and beyond the effect of the individual student's own particular background. For example, schools that are segregated by socioeconomic status differ in many ways from non-segregated schools, including teacher quality, staffing ratios, school climate, and teachers' expectations (Rumberger & Willms, 1992). A student attending a school where the average socioeconomic status of the student body is low is likely to show poorer performance than a student from a similar background attending a high income school. Thus, poverty influences student achievement twice. First through the direct effects that a students' own background has on performance, and second, through the effects of his peer's background (Coleman, 1990, p. 77; Rumberger & Palardy, 2004, pp. 238).

In fact, there is strong and consistent evidence from the United States and other countries showing that high poverty schools usually have much lower levels of educational performance on virtually all outcomes (Oakes, 1990; Peng, Wang, & Walbert, 1992; Cutler & Glaeser, 1995; Wehlage, 1993). Economically segregated schools are unequal in many ways that affect educational outcomes. Student's socioeconomic background determines the general conditions a child face at home and the resources, either physical or intangible, he could count on to support his education. In general, segregated schools share various characteristics: parents tend to be far less educated; students are less prepared and much more likely to be living in single-parent

homes; children are much more likely to have serious development issues and untreated health problems; and students tend to move much more in the middle of a school year, losing continuity and denying schools sufficient time to make an impact on their learning. Consequently, these schools are forced to devote far more time and resources to family and health crises and security. These schools are also most likely to deal with children who enter school not speaking standard English, seriously disturbed children, children that have few or no educational materials at home, and students with poor background knowledge (Orfield, Beachmeier, James, & Eitle, 1997).

In what seems to be a vicious cycle, highly impoverished schools tend to lack sufficient and appropriate resources to face their multiple needs. Economically segregated schools are more likely to draw less qualified teachers and to hold them for shorter periods of time; they tend to invest much more heavily in remediation and much less in advanced and gifted classes; and they show much lower levels of competition and peer support for educational achievement (Cutler & Glaeser, 1995; Wehlage, 1993). In those states that have implemented high stakes testing, which denies graduation or flunk students, high poverty schools tend to have by far the highest rates of sanctions.

In addition to socioeconomic segregation, schools can also be racially segregated. Indeed, segregation by income and racial segregation are highly correlated in schools across the nation. Many minority schools are also low income, which is a major reason why minority schools are associated with low performance. The correlation between Black and Hispanic enrollment and the percentage of students registered in the National Program of Free Lunch (an indicator of poverty) is an extremely high 0.72. By 2000, 60 percent of the schools in the United States had less than one-fifth Black and Hispanic students while one tenth of the schools in American had 60 to 100 percent black or Latino enrollment. Among the schools that are 90 to 100 percent

Black or Hispanic, almost nine tenths, 87.7 percent, are predominantly poor. A report from the Harvard School Desegregation Project shows that among all minority groups, Hispanic children are the most segregated in American schools. More than three-fourths of all Hispanic students attend predominantly non-white schools in the Northeast, the West, and the South. Among all the three regions segregation has always been most intense in the Northeast, where most Latinos or Hispanics are from Puerto Rico and other Caribbean islands (Orfield et al., 1997).

Schools where segregation by income and segregation by race is severe face the highest obstacles to enhance the achievement of their student body. Suarez-Orozco (2008, 2010) and Alba and Silberman (2009) found that Hispanic students are more likely to attend schools with fewer resources and institutional anomie because their families tend to settle in segregated, deeply impoverished urban settings. Since Hispanic students are experiencing far higher dropout rates than African Americans, the increasing concentration of Hispanics in low achieving and high-poverty schools further compromises their achievement. Because Hispanic students are increasingly isolated in schools where few children prepare competitively for college, a cycle of declining opportunity is likely to occur. In this context, Rumberger and Tran (2008) suggest that the most effective policy mechanism to improve student achievement among minorities is creating more diversely integrated schools through a more equitable distribution of students.

2.2.3 School and class size

The previous subsections document the large effect that poverty or socioeconomic status has on student achievement. What can be done by schools, if any, to improve achievement among pupils? Do schools have measurable effects on student achievement? There is a widespread consensus that schools indeed influence student achievement. There is less agreement, though,

on what are the main sources of those impacts. School size has received considerable attention within the literature of school effectiveness. Various large empirical studies have shown that class size reduction policy may improve student performance, especially for at-risk student groups. Secondly, despite the evidence, the number of school districts has declined consistently during the last six decades while the average class size has increased in schools across the nation.

Historically, larger schools have been advertised as providing a more comprehensive curriculum than smaller schools and reduce per pupil operating costs (Conant, 1956; Cubberly, 1922). However, empirical studies seem to point towards a different direction. Smaller size is often associated with more personal attention, more opportunities for involvement, less anonymity for students, and a more caring environment. These factors have, in turn, been hypothesized to lead to better student outcomes (Finn, 1989; Holland & Andre, 1987). Studies on student behavior indicate that smaller schools are generally associated with more positive behavioral outcomes for students while larger schools are reported to have higher dropout and expulsion rates than smaller schools (Fetler, 1989; Fowler & Walberg, 1991; Pittman & Haughwout, 1987; Schoggen & Schoggen, 1988). Most of the studies conducted between the decades of 1970 and 1990 support that small school size has an independent and positive effect upon various measures of school performance, including student achievement, extracurricular participation, student satisfaction and attendance. Yet, these studies did not suggest why this may occur (McMillen, 2004; Howley 2004; Stevenson, 2006).

Despite the fact that evidence points to the benefits of small class size, American schools have tended to be consolidated into larger schools across the nation. During the last six decades, the number of school buildings has decreased from almost 250,000 to approximately 95, 000. Also, the number of school districts has declined consistently and abruptly during the

same period (National Center for Educations Statistic, 1988, pp. 83; Stevenson, 2006). This emphasis on finding an optimal school and district size in relation to cost has been motivated by research on educational finance. Proponents of this change suggest that larger schools offer a broader and deeper curriculum, lower per pupil cost, and economies of scale, all elements highly appealing to policymakers (Cohn, 1975; Riew, 1981, 1986; Conant, 1959, p.77). Also, a series of influential literature reviews supported the conclusion that increasing spending in general, and smaller class size in particular, does not systematically lead to improved student achievement (Hanushek 1981, 1986, 1996, 1997).

A middle point in the literature is represented by studies suggesting that the effects of class size depend on the type of students served by schools. Evidence from two large scale programs, Project STAR and Project SAGE, shows larger positive impacts of class reduction on students from minority and low income (Finn a& Achilles 1999; Molnar et al, 1999; Nye, Hedges, & Konstantopoulos 1999). Similarly, Hoagland's study in California (1995) concludes that economically disadvantaged students perform better in reading when enrolled in smaller schools, after controlling for socioeconomic status. In a different study, Howley (2001) finds that children from low socioeconomic status perform better academically when served by small schools while well-to-do students tend to perform better when placed in larger schools. It has been suggested that academically-challenged students perform better in smaller schools because of factors related to the school culture and environment (e.g., a friendlier environment, more personalized attention, etc). On the other side, higher-achieving students in larger schools may take disproportionate advantage of broader and deeper curriculum offerings. Therefore, oft-documented achievement gaps between disadvantaged and majority students may become larger

within larger schools. In other words, smaller schools may have an “equalizer effect” for disadvantaged students.

But consolidating smaller schools does not automatically lead to better achievement. Infrastructure and availability of qualified resources needs to be considered before implementing a class size reduction policy. Equating small with better could be a mistake.If the intervention is to work, class size reduction policies require a large pool of qualified teachers to assume the new positions and adequate facilities to accommodate the increase in the number of classes. Lack of any of these elements may seriously compromise the effectiveness of the policy (King, 2002). Class size remains just one possibility if improved achievement is the goal. Yet, smaller schools may be worthwhile if we try to achieve equality of educational opportunity (McMillen, 2004). Consolidating smaller schools into larger ones in the name of cost-efficiency may indeed not be cost-effective if at-risk students are left behind.

2.2.4 Effective Schools for English Language Learners

The multicultural composition of the United States has a direct influence on the linguistic diversity experienced in American schools. By 2005, twenty percent of all students in the United States were immigrants or had at least one parent who is an immigrant. These students spoke a language other than English at home and half of them did not speak English well enough to be considered proficient. Are there school factors –other than language programs- that may enhance achievement among these students? According to Garcia (1988), there are some school attributes that help to provide effective schooling to language minority students irrespective of the type of language instruction they receive.

The first set of attributes refers to factors that contribute to well-functioning schools for minority students. In a pioneer study on effective schools for language minority students, Carter and Chatfield (1986) find that a shared vision, mission and goals among school staff is essential for providing a clear direction in schools serving minority students. Also, well-managed schools ideally have appointees with excellent leadership abilities who assure that staff clearly understand and accept their roles and responsibilities in teaching minority students. A strong leadership also contributes to a positive atmosphere and encourages ownership of specific programs aimed to minority students among school staff (Baker, 2011). Third, successful teachers of immigrant students monitor student's progress constantly, provide immediate feedback when needed, and use assessment data to improve student achievement and instruction (Calderon 2011; Carter & Chatfield, 1986; Garcia, 1988; Williams et al 2007). A well-functioning monitoring system has been shown to be important to identify where the gaps in the learning process learning are and to design appropriate interventions. This is particularly important since language minority students need to learn English while learning content and keeping pace with regular students.

In addition to the previous factors, there are some characteristics of teachers which seem to contribute to effective schooling. Qualified staff and professional development and training are a must in educating minority students. Highly skilled teachers and well-trained staff are critical to deal with the language and cultural differences that may affect the learning process. Teachers can receive instruction to teach English to non-native speakers and/or also be trained in intercultural education (Carter & Chatfield, 1986; Garcia, 1988). Baker (2011) concludes that teachers who are effective in teaching minority students have experience teaching this population, usually have some knowledge of the language and culture of their students, and work

hard to understand and integrate the community they serve. Furthermore, teachers who are successful with immigrant students communicate high learning expectations and show a sense of efficacy in terms of their own ability to teach. These teachers also deny cultural-deprivation stereotypes that may predispose some minority students to academic failure due to their socialization or culture (Garcia, 1988, 1991; Hakuta et al 2007). Lastly, in effective schools teachers have a strong commitment to school-home communication and encourage parents to become involved in their children's education. Garcia (1990), Carter and Chartfield (1986), and Lucas et al, all found identified a home-school partnership as an important contributor to student success. Successful schools provide opportunities for community and parental involvement and ensure openness to parents who do not speak English. For instance, schools have bilingual staff and incorporate elements of minority students' culture into the curriculum (Calderon 2011; Baker, 2011).

2.3 SOCIOLOGY OF IMMIGRATION

Immigrants and children of immigrants are close to one-fourth of the current U.S. population (about 30 million). Children of immigrants (named second generation) and immigrant children (referred to as generation 1.5) are by far the fastest growing component of the population (Portes & Kelly, 2008). Studies in the Sociology of Immigration have made important empirical and theoretical contributions to understand the educational achievement of these children in American schools. In particular, the Theory of Segmented assimilation identifies the in ways in which immigrant children are similar to and differ from the general student population. Overall, studies within this theory identify the existence of two main Pan-ethnic immigrant groups,

Asians and Hispanics, which depict different academic trajectories and adaptation patterns. To explain these differences, the Theory of Segmented assimilation examines student, family, community, and government factors that influence educational trajectories among second generation immigrants.

2.3.1 Theory of Segmented Assimilation

Research on the assimilation of second generation children falls into two theoretical perspectives. The culturalistic perspective emphasizes the newcomer's place in the cultural and linguistic life in the host society while the structuralist view considers immigrants' place within the socioeconomic hierarchy. Within each perspective, views range from darkly pessimistic to optimistic. The pessimistic view holds that disadvantaged children of immigrants are not joining the American mainstream because they belong to heavily disadvantaged ethnic and racial groups which are also isolated from opportunities for upward mobility (Telles & Ortiz; 2008). Within the same view, Huntington (2004) argues that certain groups, Hispanics in particular, have arrived in such large numbers in concentrated parts of the country that they are not inclined to acculturate. From the optimistic side, researchers advocate the traditional melting-pot theory for the twenty-first century. They argue that political and cultural assimilation continues taking place today as it has in the past and that immigrants assimilate to a mainstream that is simultaneously transformed by them (Alba & Nee, 2003; Kasinitz et al, 2008). In the middle ground lies the Theory of Segmented Assimilation, a structuralist view that holds that both positive and negative outcomes are possible. According to this theory, different groups of immigrants face distinct barriers so assimilation may occur either upward or downward. Although poorly endowed immigrant families face many barriers to upward mobility, their children may overcome these

obstacles by learning the language and culture of the host society while preserving their linguistic and cultural heritage (Portes & Rivas, 2011).

Major advances to this theory have been done by Portes and his colleagues (1998, 2004, 2008, 2011). Most of the empirical studies conducted use data from the Children of Immigrants Longitudinal Study (CILS), a longitudinal survey of second generation youths in San Diego and South Florida. The Theory of Segmented Assimilation explains differences in incorporation patterns based on three forces: 1) the human capital that immigrant parents bring with them; 2) the social context in which they are received in America, and; 3) the composition of the immigrant family (Portes & Rivas, 2011). Human capital, operationalized as formal education and occupational skills, translates into competitiveness in the host labor market and into the potential for achieving desirable positions in the American hierarchy. The transformation of this potential into reality depends on the context into which immigrants are incorporated. A receptive or at least neutral reception by government authorities, a sympathetic or at least not hostile reception by the native population, and the existence of social networks with co-ethnics pave the way to use whatever credentials brought by immigrants from abroad. Conversely, a hostile reception by government and society and nonexistent networks with co-ethnics limit immigrants' ability to translate their human capital into actual occupational opportunities. Mode of incorporation is the term used to refer to these tripartite government/society/community contexts in which newcomers are received. Lastly, the structure of immigrant families plays a key role in determining second generation outcomes. Parents that stay together and extended families where grandparents and older siblings motivate and control adolescents play a significant role in promoting upward assimilation. Single parent families experiencing conflicts and unable to

provide children with supervision have exactly the opposite effects (Portes & Fernandez-Kelly, 2008; Portes & Rumbaut, 2006).

Applying the model of segmented assimilation to examine how young immigrants adapt to life in the United States, Portes and Rivas (2011) identify two major pan-ethnic populations: Asian Americans and Hispanics. The first ones tend to be the offspring of high-human capital immigrants and perform generally well at school; Hispanics, on the contrary, often times come from families of manual workers and show fewer instances of upward mobility. Although some differences remain by country of origin, adult Asian Americans usually own material resources, are themselves highly educated, and are well received in America. Hence, this group is in a position to effectively support the education of their offspring. In an earlier study, Portes and Hao (2004) show how this path is commonly followed by Chinese and Korean immigrants with high levels of education and who as documented immigrants are entitled to the full protection of the law.

For Hispanics, particularly for Mexicans and immigrants from Central America, families enter the labor force at the bottom of the occupational spectrum. Given the importance of parental resources and the community context into which new immigrants are received, children raised in these families can expect minimal upward mobility. Poor and poorly educated migrant workers congregate in transient and segregated communities that cannot muster the minimum material and social resources to foster the economic progress of their own members, much less provide for the educational success of their offspring. Furthermore, the presence of so many disadvantaged and poorly educated Hispanics, particularly from Mexico, reinforces already strong stereotypes in the United States contributing to a highly negative reception. A remarkable fact is that U.S. government authorities regard Mexicans as potentially undocumented

immigrants and treat them accordingly (Portes & Hao, 2004). Vast differences in both human capital origins and in their reception in the United States produce large disparities in resources available for the immigrant families when they rear the new generation, as differences between Asian Americans and Hispanic Americans show. Ultimately, such disparities have an important effect on the type of assimilation that the second-generation experiences (Portes, 2006; Portes & Fernandez-Kelly, 2008).

Yet, poorly endowed immigrant families can overcome their situation through selective acculturation. There are several factors promoting upward assimilation among second generation children. Yet, most of these factors are internal to immigrant families and hence not readily amenable to external intervention. First, children can learn the language and culture of the host society while preserving their home and country language, values and customs. These children are in a better position to overcome disadvantages suffered by their parents because they are protected from the negative effects of discrimination by embracing their culture and language (Portes & Rivas, 2011). Indeed, evidence supports the paradox that retaining the native language helps children of immigrants to assimilate upward (Portes & Hao, 1998). Similarly, longer periods of U.S. residence lower academic performance pointing to the influence of acculturation in bringing down the original drive among immigrant youths (Portes & Hao, 2004). In addition, there are some characteristics of immigrant families especially beneficial to upward assimilation. For instance, the presence of authoritative parents capable of controlling children and taking them away from gangs and street life, a fact commonly found among Hispanic families (Fernandez-Kelly, 2008). Other factors include the existence of family retrospectives and middle-class cultural capital brought from the home country as well as the motivational

messages that parents transmit to children all promote upward assimilation (Portes & Fernandez-Kelly, 2008).

Aside from family characteristics, there are factors to be strengthened by policy in order to help economically and socially disadvantaged immigrant families. Voluntary programs that inform minority students in inner-city schools, counselors who take a direct interest in these children and drive them to pursue their studies, and the availability of community colleges that provide skills for decent employment and serve as stepping stones to four-year institutions are highly beneficial to upward mobility among second-generation immigrants (Portes and Rivas, 2011). Similarly, school-based programs can supplement parental gaps in information and experience by assisting youngsters as they negotiate the difficult paths leading to college. These factors can be encouraged by policy, including incentive schedules for personnel and financial support for effective outside programs (Fernandez-Kelly, 2008).

Schools, specially the inner-city schools that disadvantaged minorities attend, will not accomplish the task of achieving a minimum level of equality among their students by themselves. The answer lies in the family and community institutions that immigrant groups can develop. But low skilled workers require extensive outside support. Results from the CILS survey showed that all immigrant parents, regardless of nationality, have high educational aspirations for their offspring. Poorly educated and poorly received migrant laborers living in transient communities lack, however, the know-how or the resources to accomplish those ends. To the extent that immigration continues to meet the nation's demand for manual labor, compensatory programs of support to immigrant families and communities need to be put in place lest we confine a large number of these workers' children to poverty and permanent social exclusion (Portes & Hao, 2004; Portes, 2006).

2.4 LANGUAGE EDUCATION POLICY AND PLANNING

For any immigrant, learning the language of the host society is indisputably a major precondition for moving ahead in it. The value of retaining the parents' language is more contested. Hispanic children are not the exception. In fact, education of Hispanic students became a major issue in the national agenda largely due to the high proportion of Hispanic students who are fluent in the English language. Since the enactment of the Bilingual Education Act in 1968, lack of English proficiency has been pointed out as the main cause of underachievement of language minority students, Hispanics being the main group among them. Consequently, a series of language programs have been designed to enhance educational attainment among these students. Hundreds of studies assessing the effectiveness of these programs have been conducted but show conflicting evidence. The debate has turned fierce at some points and included arguments that go beyond purely educational considerations.

This section synthesizes the main legislation enacted in the United States with regard to education programs for minority language students. Then, the main arguments in the debate on bilingual education are presented to conclude discussing cognitive and linguistic research on bilingualism.

2.4.1 Federal policy on language minority students

U.S. legislation has mostly addressed the needs of language minority students to the extent they lack English proficiency. While some children of immigrants arrive at American schools already proficient in English, most do not. These students –referred to as English Language Learners (ELL) - must not only achieve English proficiency but also learn academic content and keep

pace with English-only students as they advance to higher grades (Rumberger & Tran, 2010). Given the enormity of the task imposed on ELL students, federal and local governments have addressed the educational needs of this population in various ways. The U.S. Congress first passed legislation that specifically focused on language minority students in the Bilingual Education Act of 1968, also known as Title VI of the Elementary and Secondary Education Act (ESEA). This Act provided some modest funds to develop programs that could guarantee "an equitable access for ELL students to the curriculum" without prescribing a particular program of instruction. Yet, the Congress encouraged "the establishment of programs using bilingual education practices, techniques and methods" (BEA, 1974, Sec. 702). Subsequent reauthorizations of the BEA in 1978, 1984, and 1988 shifted the focus of instruction from an "equitable access to curriculum" to "achieving competence in English language" and accepted English-only programs in addition to bilingual education as a valid means of instruction for ELL (Garcia & Wiese, 2002, p. 155). In 2001, the No Child Left Behind (NCLB) replaced the BEA with the Language Instruction for Limited English Proficient and Immigrant Students (Title III). This time, the term "bilingual" was completely removed and the goal became "to ensure that children who are limited English proficient, including immigrant children and youth, attain English proficiency" (NCLB. 2002, Title III, Sec. 3102).

The NCLB has had a direct impact on accountability and assessment in schools and districts. To assure equal education opportunity for all, the NCLB requires schools to meet adequate yearly progress (AYP) for all students, including Hispanics and ELL. Under Title III, schools should demonstrate that ELL make "adequate yearly progress" and meet the same standards required of Native-born English speakers. Because schools may be in jeopardy of

losing their accreditation due to poor performance, some critics argue that Title III has stigmatized ELL students as a source of problems (Fuller, 2004).

At the state level, the story of legislation regulating education for linguistic minorities varies because many states have had relatively small numbers of such students until quite recently. While 26 states have no legislation addressing directly the needs of ELL students, 12 states *mandate* special services, 12 *permit* special services and 3 states *prohibit* them[5] (Garcia, 2005). Educational goals also differ; the most common include: (1) access to core curriculum, (2) acquisition of English language proficiency, (3) maintenance of native language, (4) reduction of the achievement gap, and (5) achievement of cultural competence. Despite the general vacuum in legislation addressing the needs of English learners, the changing linguistic landscape of the United States makes evident the necessity of language education programs. One in five students in America is the child of an immigrant and most of these students speak a language other than English at home (Capps et al., 2005). Half of these students –about 10% of all students in U.S. schools- do not speak English well enough and consequently are referred to as English Language Learners (ELL). These students perform at lower levels on virtually every measure from achievement to graduation rates than almost any category of students. In addition to their academic underperformance, these students show a growing numerical importance. While the general student population grew only 2.6 percent between 1995 and 2005, the ELL population had a 56 percent increase. Hence, the academic achievement of ELL students is increasingly affecting the overall education level of the nation (Gandara & Hopkins, 2010).

[5] California restricts the use of bilingual education to teach content to non-native English speaking students under Proposition 227; Arizona has a similar restriction under Proposition 203; and Massachusetts shifted from transitional bilingual education (TBE) to sheltered English Immersion as the only program available for English learners under Question 2.

Lack of proficiency in English is frequently cited, if not exclusively, as a major cause of underachievement among Hispanics. In 2011, a study by the Education Statistics Services Institute reported that a substantial proportion of Hispanic students in grades 4 (37%) and 8 (21%) are English Language Learners (ELL). Average achievement levels showed that ELL Hispanics scored considerably lower in standardized tests than Hispanics who are not ELL (Hemprill & Vanneman, 2011). As measured by the National Center for Educational Statistics, the educational performance of Hispanics has generally lagged behind the performance of white students in mathematics. The gap between all Hispanic and White students identified in 1996 (21 points) has not significantly changed in 2009. Within the Hispanic student population, the 19-point gap between ELL Hispanic and non-ELL Hispanic in 2009 was not significantly different from the gap in 1996 (NAEP, 2009). Since Hispanics with a poor command of English face the double task of acquiring English while learning academic content, they are more likely to struggle academically than their peers who master English (Rumberger & Tran, 2008; 2009).

2.4.2 The bilingual education debate

Influenced by the wide array of goals established in the law the public debate has been strongly dominated by two contending orientations: assimilationists or nativists versus pluralists. Though both groups agree about children becoming fluent in English they differ in the route to its realization. For the nativists linguistic and cultural diversity of the recipient countries is experienced as a problem; for pluralists it is an opportunity and a societal and personal resource. Ruiz (1984) classifies reactions to language policy in the United States according to three major orientations: language-as-problem, language-as-resource, and language-as-right. Each orientation

adopted ultimately reflects underlying language ideology, conceptions of nationhood and beliefs about the place of minority cultures (Ferguson, 2006).

Nativist critics fall within the language-as-problem perspective from which major arguments against bilingual education come. Here, linguistic diversity is considered a cause of cognitive, educational and social complications and difficulties. In consequence, the value of English immersion programs as a means to fully integrate foreigners into the American mainstream is completely extolled. The most recurrent argument within this perspective holds that bilingualism is an open invitation to national disunity and inter-group conflict. Language minorities and cultural diversity are seen as a source of less integration, less cohesiveness, more antagonism and conflict in society. From this standpoint, a unified nation is considered to need "one" language (Wiley, 2007; Ricento, 2005). Secondly, research conducted between the 1920s and the 1960s supported the notion that bilingualism leads to cognitive confusion, split-identity and personality problems, as well as decreased intelligence (Saer, 1923, 1924). Measuring intelligence as IQ scores, most of the research conducted during this period found that bilinguals scored lower than English monolinguals on IQ tests. Operating in more than one language was said to pose an extra burden on individuals and thus to cause bilingual students to underperform (Pavlenko, 2005). High stakes testing along with underachievement of certain minority language groups –Hispanics being the most salient case- have reinforced this notion and led some people to suggest that Spanish is a handicap to overcome by the school system, a characteristic of the disadvantaged and unassimilated immigrant (Brisk, 1998).

In contrast, the language-as-resource perspective sees language as a personal, community and cultural resource. Pluralists fall within this perspective and consider linguistic diversity and national unity perfectly compatible. Bilingualism, in consequence, is a desirable goal that should

be promoted through bilingual education programs as it enhances intellectual, cultural, economic and social resources of individuals and societies (Lo Bianco, 2001). Instead of being considered handicapped, language minority students are considered an untapped reservoir of linguistic competence that must be used to overcome the language shortages of the United States. Given the unprecedented need for individuals with highly developed language competencies in the nation, minority language speakers should be encouraged to keep their native languages alive and be provided with the resources to do so (Wiley, 2007; Christian, 2007; Jensen, 2007; Carreira, 2007; Brecth & Ingold, 2002). As Baker (2011) points out "it is ironic that many American students spend time in school learning some of the very languages that children of immigrants are pressurized to forget" (pp. 379). In this perspective, skills in the English language can be successfully fostered through strong forms of bilingual education, which will also boost cognitive development and strengthen minority student's self-esteem (Baker, 2006, 2011).

Thirdly, the language-as-right perspective is based on the idea of language as a basic human right. People within this orientation argue that language prejudice and discrimination need to be eradicated in a democratic society. Therefore, linguistic rights are needed to protect and preserve minority languages particularly in public domains. Although this perspective enjoys great support at the international level (e.g. the 1993 United Nation Declaration on the Rights of Indigenous Peoples), language policy in the United States has not always recognized this perspective. With English being the *de facto* official language in the United States, educational instruction was assumed to occur in English for both American-born and foreign-born students during the nineteenth and most of twentieth century (Baker, 2011). Indeed, English language requirements were established from 1880 to 1925 as a condition of voting in over three-fourths of the states of the nation. This situation changed by 1968 when the Federal government –

through its passage of the Bilingual Education Act- suggested the permissibility and even desirability of instruction in languages other than English for non-native speaking students (Leibowitz, 1980). The civil rights movement as well as the massive school failure of Spanish-speaking students in Texas served as the basis for Hispanic activists to demand bilingual education as a means to guarantee equality of educational opportunity for children of immigrants. Both the executive and legislative branches came out in favor of civil rights while denounced the deprivations suffered by various minority groups, especially Mexican and Puerto Ricans. Thus, the language-as-a-right perspective advocates against unequal educational opportunity derived from language discrimination. Under this perspective, provision of bilingual education is totally justified because children of immigrants have the right to preserve their language if they wish so. Educational programs that aim preservation of native languages –as maintenance heritage bilingual education- are particularly supported in this perspective.

2.4.3 Cognitive and linguistic research on bilingualism

Education of minority students provokes reactions beyond purely educational and pedagogical matters. Yet, all these perspectives have found support in cognitive and linguistic research at some point in time. Opposition to bilingual education was widely supported by early research on the effect of bilingualism on intelligence. The narrow definition of intelligence contained in IQ tests along with severe methodological flaws present in the design of early research (absence of control groups and statistical significance tests) cast serious doubts later on this simple negative relationship. A turning point occurred with a study by Peal and Lambert (1962) who found that balanced bilinguals performed significantly higher on 15 out of 18 variables used to measure intelligence. Indeed, they concluded that bilingualism provides greater mental flexibility and the

ability to think more abstractly, increases concept formation and permits positive transfer between bilingual's two languages.

Research has moved from a period of investigating detrimental effects of bilingualism to a focus on additive effects of bilingual education. The development of cognitive theories questioning the idea of limited brain capacity for language learning was crucial to this change. Cummins' extensive work on cognitive functioning (1976, 1979, 1984, 2000) provided evidence that knowledge acquired through the native language can readily transfer to a second language. For instance, learning to multiply in Spanish can easily transfer to multiplication abilities in English. Hence, operating in more than one language does not necessarily lead to confusion and academic failure. In fact, most of the current research found cognitive advantages in bilinguals when compared to monolinguals, for instance diverging thinking, creativity, communicative sensitivity and early metalinguistic awareness (Ianco-Worral, 1972; Bialystok, 1987, 1997, 2001; Cummins, 1977). Yet, there are some studies where bilinguals are at disadvantage (e.g. Torrence et al., 1970). This is specially the case when the bilinguals studied are not "balanced", that is, when one language is substantially less developed than the other.

The Threshold Theory (Cummins 1976, 1979) is an effort to solve the inconsistencies in evidence. First proposed in 1970 and subsequently refined, this theory finds two thresholds of bilingual language competence which mediate the effects of bilingual learning on cognitive functioning. The first threshold is reached when a bilingual individual has attained a *sufficient* competence in at least one language to avoid potential cognitive disadvantage. Cognitive advantages will occur only when the second threshold is reached; that is when sufficient competence is attained in both languages. But how long does it take a student to attain sufficient competence in a second language? Cummins (1979) suggested that surface fluency needed for

everyday conversation –also referred as basic interpersonal communicative skills or BICS-can be acquired in as few as two years. However, the proficiency needed to succeed academically –also called Cognitive/Academic Language Proficiency or CALP- could take at least five to seven years to develop (Cummins, 1984, 2000). Although research suggests that ELL students are likely to fail if they are enrolled in English-only classroom or taught content without any type of English language instruction, by 2005 only half of all ELL students were in specially designed programs to serve their needs (Rumberger & Tran, 2008).

The benefits of being bilingual or multilingual referred to by early cognitive research have, in fact, been supported by later empirical studies (e.g. Hakuta et al, 1987, 2000). Once an individual becomes a fluent bilingual, higher cognitive development and higher academic performance also occur. Using data from the Children of Immigrants Longitudinal Study, the largest ongoing project on the contemporary second immigrant generation, Portes and Rivas (2011) confirm this association but not its causal direction. They found that, in addition to showing higher academic performance, fluent bilingual immigrants also keep open the channels of communication with parents and acknowledge values of the parental culture thus promoting selective acculturation. Portes and Rivas conclude that current evidence supports the paradox that preserving the linguistic and cultural heritage of the home countries helps immigrant children move ahead in America. This conclusion contrasts with the common practice of transitioning immigrant students who are English learners to English-only classrooms as soon as they develop English oral fluency. Based on the current research, this practice may actually compromise later achievement of immigrant children.

2.5 CONCLUSION

During the last decades, immigration flows to the United States have reached numbers never experienced before. From a public policy perspective, education of immigrant children is an urgent concern, in particular for those of Hispanic origin. In addition to their increasing numerical importance, Hispanic students tend to perform academically below any other racial group, they are more likely to live in poverty, and they are overrepresented among the population of English language learners. This combination of factors makes Hispanic students especially vulnerable and likely to reproduce cycles of poverty.

The literature reviewed show that socioeconomic factors have a large impact on student's achievement. Being poor and attending school with many other disadvantaged students have a large effect on decreasing school performance. Hispanic students are not only likely to be poor but also tend to attend highly segregated schools, a situation that puts an extra burden on their achievement. Yet, schools and teachers can provide effective schooling to immigrant minority students. Ethnically diverse schools, small student-teacher ratio, well-functioning environment schools, constant monitoring, and promoting parental involvement are just some of the factors that may contribute to enhancing educational outcomes among immigrant students.

Immigrant students are often times also English learners (ELL); as such, they require additional support to develop English proficiency. Cognitive and linguistic research shows that providing some type of bilingual education to ELL students produces better achievement than English-only education. In addition to enhancing achievement, bilingual education reinforces students' self-esteem and boost cognitive development. Research from the Sociology of Immigration field also shows that preserving the cultural and linguistic heritage of immigrant children facilitates their social and economic advancement. A salient fact is that English

proficiency needed to succeed academically can take about five to seven years to develop. Despite the need of English language education, few states have regulated on this matter and some of them even prohibit bilingual education.

Assimilation of immigrants and their children is not simple, homogenous or problem-free. It involves societal, community, and family factors often times not readily amenable to external intervention. Empirical studies in the Segmented Assimilation Theory show that entire immigrant groups confront significant barriers to advancement, either because they lack economic resources and formal professional skills or because they are received unfavorably by the host community. Although empirical work shows that immigrants make much progress, on average, from the first to the second generation, some Hispanic children remain at the other end of the spectrum. Children raised in unskilled Hispanic immigrant families, who are often handicapped further by unauthorized or insecure legal status, are lagging far behind. From a policy viewpoint, these children must be the population of greatest concern. As Calderon (2011) emphasizes, educational programs aimed to children of immigrants, particularly in regions where most families are struggling economically, provide them with their best and perhaps only chance to achieve economic security. Table 2.1 summarizes the main arguments exposed in this chapter and states the relationship of different factors to student achievement.

Table 2.1. Theoretical perspectives relevant to the achievement of immigrant students

Perspective	Primary proponents	Principal factors analyzed	Relation to student performance
		Education Field	
School effectiveness	Coleman	Poverty (measured as socioeconomic status)	Negative
	Coleman, Rumberger & Palardy	Income/racial segregation	Negative
	Finn, Holland & Andre, McMillen, Howley, Stevenson	School/class size	Negative Larger effects observed on minority students
School attributes	Carter & Chartfield, Calderon.	Internal school organization; clear vision and mission; effective and continuous monitoring system; professional development	Positive Effects observed in all types of students
Teacher attributes	Garcia, Hakuta, Calderon, Baker.	Teacher's knowledge of the culture of minority students, high learning expectations for minority students; denial of cultural-deprivation stereotypes; school-home communication	Positive Attributes particularly important for teaching minority and/or immigrant students
Family attributes	Garcia, Carter and Chartfield	High parental involvement,	Positive Parents who actively involve in their children's education contribute to improve achievement levels
		Sociology of Immigration	
Segmented assimilation	Portes, Rumbaut, Fernandez-Kelly, Rivas, Hao	Human capital brought by immigrant families to host countries	Positive
		Mode of incorporation	Positive, if government/society/ Community reception is favorable or neutral Negative, if reception is hostile
		Structure of the immigrant family	Positive, if parents stay together and extended family motivate/control immigrant children. Negative in single-parent families experiencing conflicts

Table 2-1. Theoretical perspectives relevant to the achievement of immigrant students (continued)

Perspective	Primary proponents	Principal factors analyzed	Relation to student performance
Language Education Policy and Planning			
Nativist perspective	Saer et al, Pavlenko	Bilingualism	Negative Bilingualism lead to cognitive confusion, split-identity, personality issues, and decreased intelligence
Pluralist perspective	Lo Bianco, Christian, Jensen, Carreira, Baker	Bilingualism	Positive Bilinguals show greater diverging thinking, creativity, and communicative sensitivity than monolinguals
Thresholds theory	Cummins, Hakuta.	Bilingualism	Positive for "balanced" bilinguals Proficiency needed to succeed academically takes between 5 and 7 years to develop.
Selective acculturation	Portes & Rivas	Linguistic and cultural heritage	Positive Fluent bilinguals show higher academic performance and keep open channels of communication with their parents, both elements contributing to upward mobility.

3.0 HISPANIC IMMIGRANTS IN THE UNITED STATES

Immigration has been a recurrent and hotly debated theme in the history of the United States. The topic has recently gained, however, a new vigor given the unprecedented influx of immigrants since 1990. Incorporation of the newcomers into the mainstream society and the use they make of education, health, and social services are some of the major concerns that today occupy state and local governments. This chapter provides a brief historical background of immigration in the United States, with an emphasis on recent Hispanic immigration. It portrays the most important demographic changes experienced in the U.S. during the last decades and provides an account of major legislative actions proposed by federal and local governments in order to control immigration and regulate the incorporation of immigrants into society. The intention of this chapter is to situate Pennsylvania in the national immigration context by characterizing the surge of Hispanics in this state and describing major legislative proposals intended to regulate the immigrant influx.

3.1 IMMIGRANTS TODAY AND BEFORE

Migration has clearly been one of the most dominant themes in the history of the United States. The migration process has been an ongoing one; in fact, the foreign-born and their U.S. born offspring have represented at least a third of the total U.S. population from the foundation of the

republic until today (Bergard & Klein, 2010). Despite this continuous immigrant presence, there are some differences that stand out across time; the origin, volume, socioeconomic background, and destinations of recent immigrants are substantially different from the foreign-born population at the beginning of the twentieth century. The first massive wave of foreigners came largely from Northwestern Europe, between the decades of 1830 and 1880, followed by immigrants from Eastern and Southern Europe, between 1980s and 1920s. In contrast, immigrants of the post-World War period came mostly from Latin America, the Hispanic Caribbean, and Asia (Hirschman & Massey, 2008). By the late 1970s, Asians already comprised 35% of all documented immigrants while Latin Americans accounted for 44%. One group, Mexicans, represented 14% of all immigrants. Since 1970, Asia and Latin America already accounted for two-thirds of the entire immigrant population, which came from just twelve countries: Mexico, Cuba, El Salvador, Guatemala, Nicaragua, the Dominican Republic, Haiti, the Philippines, Vietnam, China, Taiwan, and India (Hamamoto & Torres, 1997).

In addition to variations in national origin, differences in the volume and age of recent immigrants are noteworthy. Although the immigrant influx that occurred between 1890 and 1920 comprised a larger percentage of the total U.S. population than it does today, the absolute numbers of current immigrants exceed by far anything experienced before. Today's immigrant population is growing six and a half times faster than the native-born population. For example, the more than 10 million immigrants who arrived between 1990 and 2000 represented 42% of the increase in total U.S. population during that period (Rodriguez, 2008). Amongst the foreign-born, immigrant children and U.S.-born children of immigrants are the fastest growing segment of the U.S. child-age population. Various scholars have acknowledged the relevance that this young influx of people has for the entire U.S. society. Because the U.S. population is aging

rapidly, and since birthrate is relatively low among native-born citizens, more young working people will be needed to maintain the Social Security system through payroll taxes. Hence, immigrants and their offspring can be highly beneficial to the U.S. society (LeMay, 2007). Children of immigrants represent 20 percent of the total student population and their achievement is increasingly affecting the performance of the overall student population. For this reason, it is imperative to contribute to their successful adaptation to U.S. schools through policies and practices capable to address any specific needs they present (Portes & Rivas, 2011; Suarez-Orozco & Suarez-Orozco, & Todorova, 2008; Gandara & Hopkins; 2010).

Third, post-1970 immigrants represent a broader socioeconomic spectrum than pre-1920 immigration (Jensen, 1989; Massey, Alarcon, Durand, and Gonzalez, 1987). Sociological research has documented a plurality of situations in the patterns of incorporation among recent immigrants. There are some immigrant groups who have been able to move into middle class while building vibrant entrepreneurial enclaves. Cuban immigrants in Miami are a good example of this pattern. At the other end of the spectrum, there are unskilled immigrant families, often times handicapped further by an unauthorized legal status, who live in widespread poverty and depend on low-paid menial jobs (LeMay, 2007). To a certain extent, these divergent outcomes have depended on the skills and resources of the first generation immigrants. While Asian-Americans tend to come from high-human capital families, many Hispanics come from families of manual workers (Portes & Fernandez-Kelly, 2008; Portes & Rivas, 2011). In addition to specific family background, divergent outcomes in patters of incorporation also depend on the political and social context in which immigrants have been received by host societies (Portes & MacLeod, 1996).

A fourth change has been the shift in the geography of the new immigration (Singer, 2004). A common finding from research on migration waves occurred between 1965 and 1980 was its concentration in the states of New York, California, Texas, Florida, and Illinois, usually within a handful of the so-called "gateway" cities such New York, Miami, Los Angeles, Chicago, and Houston. Such destinations have become less frequent among post-1990 immigrants, who now settle in small towns in the Midwest and the South. Because the presence of immigrants was almost negligible in many regions of the United States, small shifts away from traditional gateways have implied huge relative increases at new destinations (Massey & Capoferro, 2008). The saturation of immigrant niches in gateway cities, along with the creation of labor-market opportunities in other areas are among the major explanations of diversification of the immigrant geography. Moreover, the growing volume of immigration since 1970 provided larger visibility to immigrants in places with little immigration history, such as smaller towns in the Midwest and the South (Hirschman & Massey, 2008).

3.2 HISPANICS IN THE UNITED STATES: ORIGINS AND CHARACTERISTICS

From the beginning of the 21st century, Hispanics or Latinos replaced African-Americans as the largest minority group. According to the 2008 Census Bureau estimates, Hispanics are projected to account for 30% of the national population by 2050 while African-Americans, today the second largest minority group, are expected to remain at 12%.[6] Even though it has been only

[6] It was this change in origins and volume of the foreign-born which lead the U.S. Congress to require self-identification questions about Hispanic origin in the census. In 1983, the U.S. Census Bureau began enumerating Hispanics as a separate census category for the first time. See Bean and Tienda, 1987 for a discussion on this change.

recently that their political, demographic and economic importance has received a great deal of public attention, the Hispanic presence in the U.S. has a long history. As result of the Mexican-American War in 1848, the U.S. absorbed a large part of the then Mexican territory -today the states of California, Texas, and New Mexico- and with that a considerable Mexican population into its national borders. Moreover, a steady flow of Caribbean immigrants has settled down, mostly in the states of New York and Florida, from the beginning of the nineteenth century (Bergard & Klein, 2010). Cuban immigrants joined the Caribbean immigration to the U.S. after the Castro revolution; elites, then middle class, and finally working-class families fled persecution and socialism. Finally, refugees from all parts of Central America joined Cubans motivated by civil wars and the political unrest associated with them. This time, immigrants from Nicaragua, El Salvador, and Guatemala contributed to increase the already important Latin American population in the U.S. (Hirscham & Massey, 2008).

Indisputably, the largest Hispanic immigrant group in the U.S. comes from Mexico, a nation with which the U.S. shares a 2,000 mile-border. But Mexican migration is not a recent phenomenon. It started at the beginning of the twentieth century and became significant during the Second World War, when U.S. employers imported Mexican workers through the Bracero program, an initiative of the federal government to cope with labor shortages derived from war. Thousands of Mexican workers came every year to labor in a seasonal basis –usually nine months a year- in a variety of economic sectors, from agriculture to railroad building. It has been estimated that five million Mexican workers participated in this program. When the Bracero program was abruptly ended in 1964, largely due to the political opposition of U.S. labor unions, the controlled entry of temporary workers was thus replaced by a flow of illegal immigrants. According to LeMay & Barkan (1999), the same workers that had been entering under the guest

worker provision continued coming to the U.S., except they did not return to Mexico after nine months. These immigrants had already established social networks, were familiar with the country, and knew where to find job. Likewise, the employers who had legally hired workers in the Bracero Program knew the Mexican workers and continued to hire them after it ended. As a consequence, by 1980 there were about 2 million undocumented Mexican immigrants residing in the U.S. (LeMay, 2007). The influx of undocumented Mexican immigrants started there and has continued growing ever since the termination of the Bracero program. Indeed, numerous studies note the importance of the Mexican immigration patterns to the U.S. established during the Bracero period (Chiswik, 1988, Massey et al., 1987). Such chain-migration patterns have persisted long after the end of that program and indeed influence today's undocumented immigration flows. Undocumented Mexican workers today are no longer restricted to agricultural jobs but are rather hired in a variety of sectors. Nevertheless, they continue taking advantage of previously established patters of migration and kin networks, friends, and other Latino communities already in the country (LeMay, 2007).

It should be made clear that the Hispanic population of the United States is not one homogenous ethnic or racial group, as is often perceived by the non-Hispanic public. Although a useful category, the term Hispanic or Latino conceals the extraordinary diversity existent between and within national groups.

This term is equally applied to define different national subgroups that arrived at different time periods and for a variety of reasons. As a group, Hispanics illustrate a great diversity in terms of socioeconomic and racial backgrounds. For example, White upper-class Cubans, Dominicans and Puerto Ricans with mixed racial backgrounds, and Guatemalan Mayans are all group together within the Hispanic category Hispanic even if they do not have much in common.

In fact, the terms Hispanic and Latino have not historically been used as self-identification references for first generation Latin American immigrants, who rather identify themselves as Mexicans, Nicaraguans, Cubans, Argentineans, etc. In fact, nationality continues to be the first and most important reference point of self-identification among first-generation Latin American immigrants (Bergard & Klein, 2010). Among all Hispanics, Puerto Ricans represent a special case. Although culturally considered as part of Latin America, they have been U.S. citizens since 1917 when the Jones-Shafroth Act bestowed U.S. citizenship upon them. Since then, Puerto Ricans are no longer considered international migrants and are thus allowed to travel and settle in the United States as any other U.S. citizen; yet, they are still classified as Hispanics by the U.S. Census Bureau.

Despite the common language and similar religious beliefs, Hispanics display a extraordinary diversity that is usually underscored by the literature. Some pioneer studies have started to document important differences by national origin with regard to demographic characteristics (Bergard & Klein, 2010), educational trajectories (Suarez-Orozco et al., 2008), and patterns of adaptation (Portes & Rumbaut, 2001). Investigating and understanding such diversity is of particular relevance since Hispanics is the first minority group expected to account for a third of the total U.S. population.

3.3 TRADITIONAL GATEWAY STATES AND NEW DESTINATIONS

The distribution of immigrants today differs substantially from past settlement patterns. Recent immigrants are now bypassing traditional urban centers and gateway states and moving to small

cities the South and the Midwest.[7] In most of the cases, the new destinations have had limited exposure to immigration and their experience coping with linguistic and cultural diversity is virtually non-existent (Rodriguez, 2008). Also, the new destinations share some economic characteristics. On the one side, they tend to be small towns and rural areas with well-developed and growing low-skill service sectors. Poorly paid jobs that are difficult, dirty, and sometimes dangerous is a common trend in many new destinations. On the other side, immigrants who move in response to these low-wage industries tend to be younger, more poorly educated, more recently arrived to the U.S., and more Mexican (Donato, Tolbert, Nucci, & Kawano, 2008).Once a new destination has attracted a critical mass of immigrants, others are relatively more likely to follow them, thanks to social and kin networks existent among immigrants (Leach & Bean, 2008).

Empirical research points to the industrial restructuring of the U.S. economy as a major cause for the decentralization of immigrant labor away from gateway cities on the East and West Coasts to medium-size and small communities in the South and Midwest (Massey & Caporferro, 2008; Leach & Bean, 2008; Parrado and Kandell, 2008). As U.S. industries and employers faced greater international competition and declining profits, they have sought to cut costs through subcontracting, deskilling, and decentralizing production to areas with lower wage rates. Since immigrants have fewer options and are generally more tolerant of difficult working conditions, particularly if they are unauthorized, they fill the gap in an increasing segmented domestic labor market. Another major explanation of diversification of immigrant destinations is the selective

[7] The geographic regions are defined as: Midwest (Illinois, Indiana, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin, Iowa, and Kansas), The Northeast (Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont), the Southeast (Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Virginia, and West Virginia), the Southwest (Arizona, New Mexico, Oklahoma, and Texas), and the West (Alaska, California, Colorado, Hawaii, Idaho, Montana, Nevada, Oregon, Washington, and Wyoming).

hardening of the border in San Diego and El Paso, which was intended to deter undocumented flows coming from Mexico and Central America. This measure channeled undocumented migrants away from California and Texas towards new crossing points and final destinations in the West, Northeast, and Southeast(Massey & Caporferro, 2008). Lastly, social mechanisms also contribute to new immigrant settlements as families quickly recruit friends, kin, and co-ethnics to new destination areas (Hirschman & Massey, 2008).

Since 1990, immigrants have diverted away from the five main immigrant-receiving states (California, Texas, Florida, New York, and Illinois) toward entirely new states of destination (see Figure 3.1). The top ten states experiencing significant immigrant growth from 1990 to 2010, in descending order of growth are: North Carolina, Georgia, Arkansas, Tennessee, Nevada, South Carolina, Kentucky, Nebraska, Alabama, and Utah. In addition to these ten states, many other states have experienced important shifts in their population. In Pennsylvania, the recently arrived immigrant population (over the last year) constituted 1.8 percent of their total population in 1980, a number that increased to 2.5 percent in 2005. Although these percentages may seem quite modest, they conceal very rapid shifts in the absolute size of flows into states that had received very few immigrants before. For example, the number of immigrants recently arrived over the last year in Pennsylvania went from 25,000 in 1980 to 117.000 in 2005.

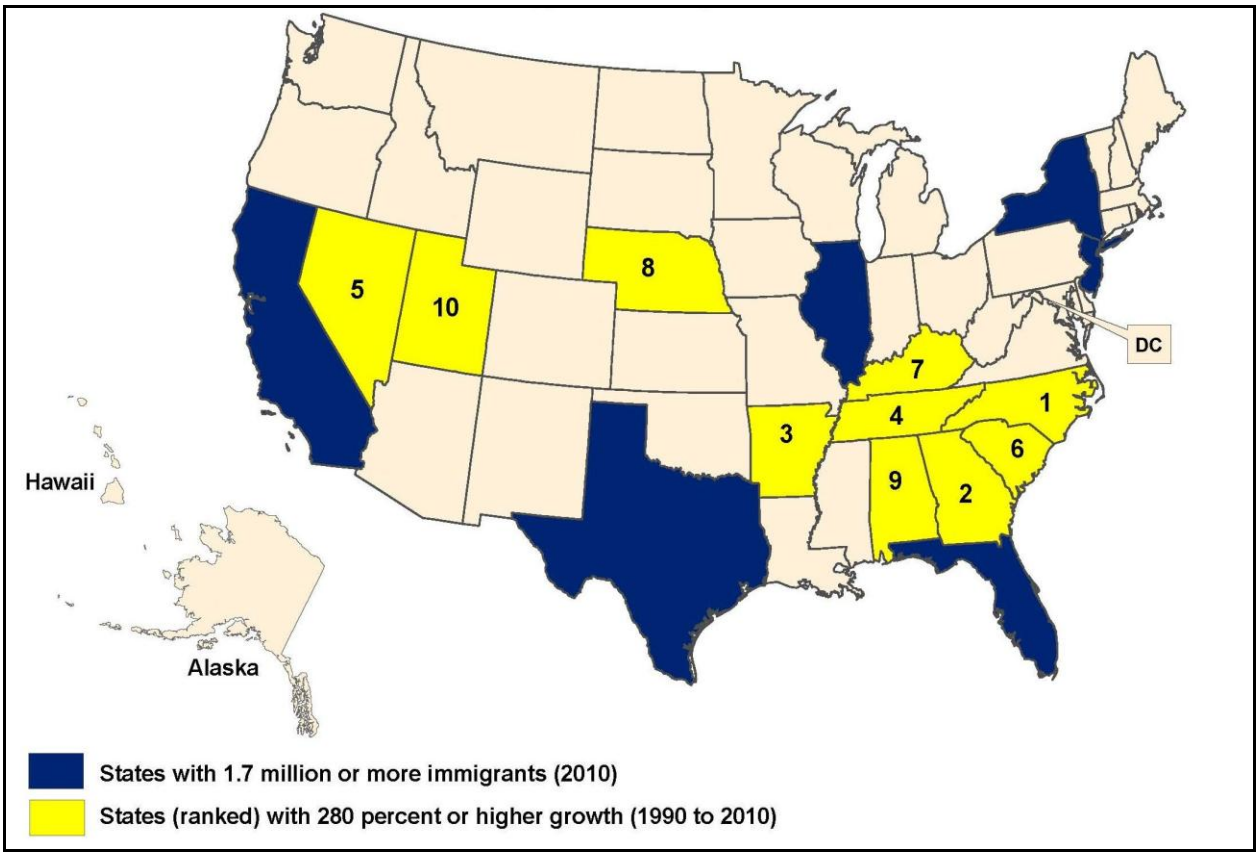

Figure 3.3.1 States with the largest and fastest growing immigrant populations*

Source: Reproduced with permission of the Migration Policy Institute. MPI is a nonpartisan thing tank in Washington DC, dedicated to people worldwide. (www.migrationpolicy.org)
*MPI tabulations of the U.S. Census Bureau's 1990 Decennial Census and 2010 American Community Survey.

When only Hispanic immigrants are considered, a similar pattern is revealed. Hispanics are populating new places in the Midwest, Southeast, and Northeast, as well as new destinations in the West (see Figure 3.2). It is worth noticing that the increase of Hispanics is concentrated in a handful of counties within the new destination states, illustrating a pattern of uneven population growth at the state level. For this reason, the counties experiencing the largest increase in Hispanic immigrants during the last decade are located in states different from those identified as experiencing the largest immigrant growth. The top ten counties experiencing the largest percent of Hispanic growth during the last decade, in descending order of growth are: Stewart county, California (1740%.); Telfair county, Georgia (842%); Beadle county, South Dakota (763%);

Adams county, Mississippi (687%); Trempealeau County, Wisconsin (595%); Luzerne County, Pennsylvania, (479%); Sevier County, Tennessee (441%); Paulding County, Georgia, (420%); Frederick County, Virginia, (414%); and Macon County, North Carolina, (391%). First paragraph.

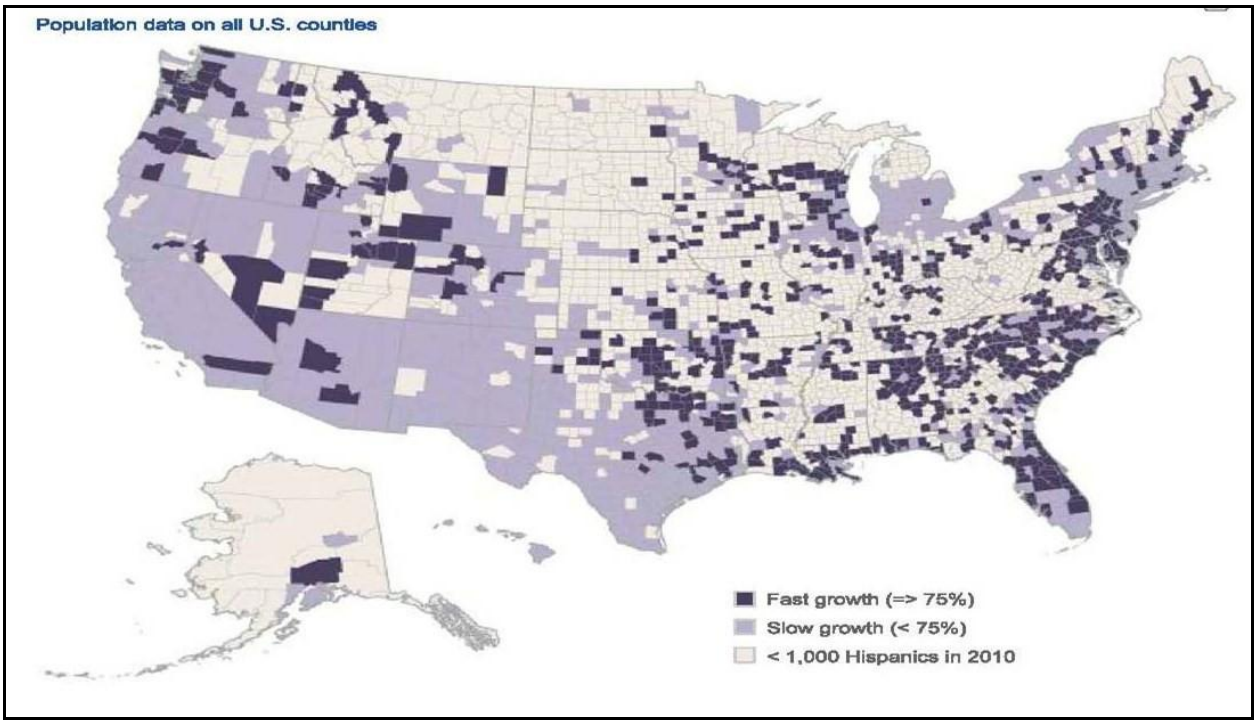

Figure 3.2 Hispanic growth by county

Source: Published by the Pew Hispanic Center. Analysis of Decennial Censuses (2010) and U.S. Census Bureau county population estimates (vintage 2009 estimates for 2000

3.4 FEDERAL, STATE, AND LOCAL REACTIONS TO IMMIGRATION

3.4.1 A generation of restrictive immigration policy: IRCA and IIRIRA

The unprecedented number of immigrants experienced since 1990 have influenced government efforts to regulate immigration at the federal, state and local level. Although the apparent goal of U.S. policy has been to cap or reduce immigration, the opposite has actually occurred (Hirschman & Massey, 2008). According to the Center for Immigration Studies, more immigrants entered the U.S. between 2000 and 2005 than at any other five-year period in the nation's history. By 2000, the foreign-born population and their children represented more than 60 million or one in every five Americans. Among the recent immigrants, the Pew Hispanic Center estimated that 11.5 million were unauthorized, which has greatly contributed to the intensity of the debate (Passel, 2006). Among the undocumented population, Latin America accounts for three-fourths of all unauthorized immigrants: Mexico, 62%; El Salvador, 6%; Guatemala, 5%; and Honduras 3% (Hoefer, Ryina, & Baker, 2011).

The Immigration Reform and Control Act of 1986 (IRCA) was the first major legislation intended to regulate the undocumented immigrant influx. Annual apprehensions at the U.S.-Mexican border climbed from the tens of thousands in 1960s to nearly a half-million by 1970, to nearly 2 million by the time that IRCA was passed. IRCA sought to combat undocumented flows in three specific ways: it addressed immigration pull factors by imposing sanctions on employers who knowingly hire undocumented workers; it deter new immigrants from crossing the border illegally by allocating new resources to expand Border Patrol; and it granted amnesty for undocumented migrants who could prove continuous residence in the U.S. after January, 1981 (Hamilton & Chichilla, 1997; Massey & Capoferro, 2008). After IRCA there was a slight dip in

apprehensions at the borders, but those numbers climbed again since 1988. Since then, attempts to increase border security at problematic areas have simply resulted in a temporary increase in apprehensions, followed by a shift in the flow of illegal traffic. In 1994, the Border Patrol allocated additional persons to San Diego, California, and El Paso, Texas. As LeMay (2007) notes, illegal traffic simply moved to other geographic areas.

In an effort to further control undocumented aliens, the Illegal Immigration Reform and Immigrant Responsibility Act of 1996 (IIRIRA) required the attorney general to install additional physical barriers to prevent illegal crossing in high-unauthorized entry sectors. The Act also considered immediate-deportation sanctions for immigrants unlawfully present in the U.S. For instance, immigrants who had been in the U.S. without authorization for 180 days but less than one year must remain outside the U.S, for three years unless they obtain a pardon. If the period of unlawful presence is more than 365 days, they must stay outside the U.S. for ten years. Also, previous to IIRIRA immediate deportation was caused only for offenses that could lead to five years or more in jail. Under the Act, minor offenses such as shoplifting make immigrants eligible for deportation. IIRIRA was applied retroactively to all those convicted of deportable offenses (LeMay, 2007). Despite the enactment of IRCA and then IIRIRA, regulation of immigrant flows continues to be a highly controversial topic largely because of the impact of undocumented workers in the economy. Current controversy over immigration centers on whether immigrants are overall beneficial to the nation or if they represent a huge drain on resources, particularly in public education, health, welfare services, and added costs to the justice criminal system.

3.4.2 State and local lawmaking

The changing flow of legal and unauthorized immigration has led to a growing sense of crisis and a widespread dissatisfaction registered in the news media about the inadequacy of federal law to meet the challenges brought about by immigration (Rodriguez, 2011). State and local lawmakers have responded to this shifting demography by attempting to exert control over immigrant movement. But state and local participation in immigration regulation hardly represents a new phenomenon. During the 1970s and 1980s, state legislatures sought to limit immigrant access to various social benefits and institutions, including the public schools. By 1986, as many as twelve states had passed laws sanctioning employers who hired unauthorized immigrants. Just in 2007, state legislatures considered more than a thousand laws intended to control immigrant movement (Rodriguez, 2008).

Some of the empirical evidence suggests that enforcement-oriented measures, as well as laws that restrict benefits available to immigrants, pass at higher rates in jurisdictions that have experienced the most rapid growth in their immigrant populations. According to the Migration Policy Institute's analysis of state legislative activity, more than 1400 bills addressing immigration and immigrants were introduced in state legislatures during 2007, although just 16 percent were signed into law. Using a four-fold classification,[8] the MPI finds that bills that

[8] Measures that expand the rights and benefits of immigrants include bills that grant in-state tuition to unauthorized students, remove citizenship and immigration status requirements from public benefits eligibility criteria for children, and define human trafficking to include possession or destruction of immigration papers. The contracting rights' category includes bills that require proof of citizenship in order to obtain a driver's license, impose certain prohibitions on the receipt of state public benefits, and exclude from workers' compensation programs anyone who does not have proof of lawful immigration status. Employment regulation includes bills that regulate the hiring of unauthorized workers, the receipt of state contracts and licenses, and participation by employers or contractors in the federal E-verify database. The last category includes measures related to state and local enforcement of immigration law, reform of the criminal justice system as it pertains to immigrants, and the creation of new immigration-related crimes in the criminal justice system.

expand immigrants' rights (126) were the most popular type of measure introduced in traditional immigrant-receiving states (such as California, New York, and Texas), with 13% of the proposed bills passed. These states legislated across a diverse array of subjects and were more likely to introduce legislation on human trafficking, integration policy, and the provision of language services. Contrary to this trend, states experiencing a recent and rapid immigration growth (such as North Carolina and Nevada) were more likely to introduce bills that contract immigrants' rights, although only 9% of these bills became law. Legislators in new destination states introduced more than twice the number of employment bills that those in traditional immigrant states. They were also more likely to legislate on public benefit eligibility and criminal justice (Laglaron, Rodriguez, Silver, & Thanasombat, 2008). In a study of restrictive immigration-related policies across the nation, O'Neil (2010) finds that restrictive immigration lawmaking tends to occur in populous and metropolitan areas, with lower unemployment rates and high overall population rates, and with an important immigration growth dominated by Mexicans and other Latin American immigrants.

According to Rodriguez (2011), differences in the type of legislation proposed in states with different demographic situations suggest that subfederal regulation of immigration emerges from public concerns over rapid demographic change as well as confrontation with the unfamiliar. State and local lawmakers respond to a shifting demography by attempting to exert control over immigrant movement. When states and localities treat immigrants differently, they effectively exert power to control the movement of people by creating incentives or disincentives for immigrants to remain in a particular location.[9] In some cases, state and local measures that

[9] Not only would such states and localities be imposing externalities of a sort on their neighbors, they might also be interfering with the basic and constitutionally protected right to freedom and movement. For a discussion on this see Rodriguez 2008.

facilitate immigrant integration will attract immigrants across nation, state, and local borders. In other instances, state and local measures will force immigrants out from communities by complicating their integration into receiving communities (Rodriguez, 2008)

3.5 PENNSYLVANIA IN THE NATIONAL CONTEXT

3.5.1 Characteristics of the foreign-born population

Pennsylvania has become one of the new immigrant destinations, particularly for Hispanics and Asians, given the rapid demographic transformation this state has experienced over the last decade. According to the U.S. Census and the Migration Policy Institute, the foreign-born population in this state changed from 508,291 immigrants in 2000, to 756,410 in 2011, representing a growth of 48.8 percent. Given the size of its foreign-born population in 2011, Pennsylvania ranked 13 out of the 51 states and District of Columbia. Worth noticing is that Pennsylvania attracts both domestic and international migration. By 2011, 57.4 percent of all immigrants arrived to Pennsylvania from abroad while 42.6 relocated from other state. Of the total foreign-born population in Pennsylvania, the largest share is from Asia (37.5%), followed by Latin Americans (29.5%), and Europeans (24.1%).[10]

Even though Pennsylvania is not considered among the top-ten states with the largest growth of foreign born population, Hispanic immigrants have considerably increased across the state. According to the U.S. Census, 66 out of 67 counties in Pennsylvania experienced an

[10] Analysis of U.S. Census data conducted by the Migration Policy Institute. See Pennsylvania Fact Sheet. Social and Demographic Characteristics

increase of Hispanic immigrants between 2000 and 2010. Despite this general trend, the immigrant influx has concentrated in some localities. In fact, the top-four counties with the largest growth of Hispanics experienced increases above 200 percent: Forest County (597%); Luzerne County (479%); Clearfield County (305%); and Lackawanna County (261%). In 22 counties, the percent growth of Hispanics was between 100% and 199%, while in 30 counties the increase was between 50% and 99%. Appendix D shows total population, Hispanic share of the total population, and percent growth of Hispanics for all Pennsylvania counties. It must be noted that Hispanic immigration increased even in those counties experiencing a decrease in total population (see last four columns of Appendix D).

Hispanic immigrants in Pennsylvania differ in important ways from the non-Hispanic foreign-born population; in particular with regards to socioeconomic status, language ability, and educational attainment. Poverty incidence is higher among Spanish-speaking immigrants than for other foreign-born. In 2011, 31.2 percent of the immigrants who spoke Spanish at home live in poverty, compared to 16.4 of immigrants who speak Asian languages, and 12.1 percent of persons who spoke indo-European languages.[11] English proficiency also differs by language group. In 2010, 70.5 percent of all Pennsylvania Spanish-speaking immigrants were considered limited English proficient. This number was 44.5% for immigrants who spoke Indo-European languages and 57.9 for those who spoke an Asian language. When considering educational attainment, 33.4 percent of Spanish-speaking immigrants have less than high school diploma, compared to 21.6 percent of Asian immigrants that did so and 22 percent of immigrants who spoke an Indo-European language. [12] These statistics suggest differences in levels of human capital and socioeconomic conditions among immigrants in Pennsylvania. With a relatively

[11] See Pennsylvania Fact Sheet. Income and Poverty. Migration Policy Institute.
[12] See Pennsylvania Fact Sheet. Language and Education. Migration Policy Institute.

poorer English language ability and lower educational attainment than other foreign born, Hispanics are likely to have fewer resources to successfully incorporate into the receiving communities across Pennsylvania.

Second paragraph.

3.5.2 Immigration policymaking

As discussed earlier in this chapter, new destination states tend to adopt a more restrictive approach than traditional destinations when it comes to immigration lawmaking. In most of the cases, legislation intended to constrain immigrants' rights has emerged as response to a rapid immigrant growth. Pennsylvania clearly exemplifies this pattern. Just in 2007, Pennsylvania introduced 16 bills and immigration-related resolutions, of which 2 bills were intended to expand the rights of immigrants; 4 intended to contract immigrants' rights; 5 regulated employment and 5 addressed criminal justice (Laglaron et al., 2008). A recent study of immigration-related lawmaking found that Pennsylvania and California (22 each) had the largest number of restrictive bills proposed between 2000 and 2007, followed by the new immigrant destination states of Virginia (15) and North Carolina (12) (O'Neil, 2010b). In fact, Pennsylvania attracted national attention due to the fact that Hazelton, a city of 25,000 habitants, has been the locality most associated with a restrictive trend on immigration policymaking (Rodriguez 2008, 2011).

The Illegal Immigrant Relief Act (IIRA), proposed by Major Lou Barletta and passed by Hazelton's council in 2006, generated particular scrutiny and debate across the nation. This law was intended to control immigrant movement and limit their effects on the local community by regulating the relationships between immigrants and those with whom they associate in the private sphere, namely employers or landlords. Nevertheless, the law was never enforced as a

result of a high-profile lawsuit supported by the American Civil Liberties Union and other civil rights organizations.[13] The Act would have required employers to submit employees' identification for work eligibility upon the city's request and would have allowed legal workers to sue employers who hired unauthorized workers. Hazelton's law would have also imposed substantial fines on those who provided housing "knowingly or in reckless disregard" to an unauthorized person, required tenants to obtain occupancy licenses from the city, and imposed substantial fines per unauthorized tenants on landlords who failed to comply with the law. The Act would also have allowed the city to investigate the legal status of an employee or tenant upon request from any citizen, business, or organization (O'Neil, 2010a).

Hazelton exemplifies how immigration has transformed smaller cities and towns across the U.S. as well as the reactions of local governments to adapt to this change. Hazelton is located in Luzerne County, which experienced the sixth largest growth of Hispanic immigrants in the country between 2000 and 2010. Immigrants, largely from the Dominican Republic, made up of 14 percent of Hazelton's population by 2007. According to Barletta, they were responsible for the increasing crime rate while also being straining the city's budget. After Hazelton's ordinance was rejected by a District Court, at least 60 restrictive local policies received formal consideration in 2007. Some localities have followed Hazleton's ordinance as a model while carefully tailoring policies to survive legal challenges. An example of this approach is Fremont, Nebraska, which in 2007 approved a ballot initiative intended to prevent landlords and employers from doing business with unauthorized immigrants. Fremont's ballot, approved in

[13] In 2007, a District Court rejected Hazelton's initiative and left the city with a cost of $5 million. The decision relied on due process concerns and preemption by federal law to declare employment and rental aspects of Hazelton's law unconstitutional. See Lozano v. City of Hazelton decision.

June, 2010, was written with assistance from lawyers involved in depending Hazelton's ordinance (O'Neil, 2010a, 2010b).

3.6 SUMMARY

This chapter highlighted the most important changes in immigration patterns to the U.S. occurred during the last decades. Immigrants today are more numerous, more likely to come from Latin America and Asia, depict a broader socioeconomic spectrum, and settle in new destinations with limited previous exposure to immigration. Lawmakers at the federal, state, and local levels have responded to this shifting demography by attempting to control immigrant movement and regulating immigrants' life around a variety of topics such as housing, public benefits eligibility, and employment. Empirical research shows that immigration-related proposals tend to be more restrictive in jurisdictions experiencing a rapid growth in their immigrant population than in traditional immigrant destinations. Pennsylvania, a state experiencing a rapid, significant, and uneven surge of immigrants, seems to fit this trend to some extent. Hazleton, a smaller city in Eastern Pennsylvania, attracted national attention as it became the epitome of restrictive immigration lawmaking due to the approval of its Illegal Immigrant Relief Act (IIRA) in 2006. Although the IIRA was never enforced, it reflects the public concerns that residents of some smaller cities have over rapid demographic changes. Despite the IIRA was formulated to be applicable to all immigrants, it was created with the particular intention to control the influx of undocumented Hispanic immigrants in the region, which were seen as a fiscal burden and a cause of violence. But the immigrant influx did not stopped with the enactment of the IIRA; domestic and international Hispanic immigration have continued arriving

to Hazelton and other cities and small towns in Pennsylvania during the last five years. With the overall increase of immigrants there has also been a growth in the student population, which now includes more immigrant children and U.S.-born children of immigrants than a decade before (Massey & Capoferro, 2008). Given its growing importance, investigating the conditions under which these students can succeed academically is a pressing concern for education policy in Pennsylvania.

To this end, the next chapter presents the research methods utilized to examine the current achievement of Hispanic students in Pennsylvania and illustrate major challenges and best practices in the field. It specifies the methods of data collection applied to during the Hierarchical Linear Modeling and the in-depth studies if four elementary schools in Reading School District.

4.0 METHODOLOGY

This dissertation analyzes the effects of public education programs on Hispanic students in the State of Pennsylvania, which is a state experiencing a recent and rapid surge of Hispanic immigrants. This study identifies the necessary determinants of achievement for Hispanic students, while also systematically illustrating a number of public policy challenges that constrain educators in Pennsylvania. In order to achieve these goals, this study utilizes a mixed-methods approach combining quantitative and qualitative research techniques. In the first part of the analysis, Hierarchical Linear Modeling is applied to examine the effect of school and student attributes on achievement. The second part is based on four case studies, for which interviews and classroom observation serve as data.

This chapter describes the methodology implemented in this dissertation. First, the research questions and the research design utilized to answer them are explained. The next section characterizes the population of study for each stage of the analysis. After that, data collection and methods analysis are discussed. The last part specifies major limitations of this study.

4.1 RESEARCH QUESTIONS AND RESEARCH DESIGN

The overall goal of this dissertation is to shed light on our current understanding of education of Hispanic minority students in states with recently changing demographics, and thus inform policy. It specifically asks three questions:

i. What are the effects of student background characteristics and school attributes on individual performance of Hispanic students in Pennsylvania elementary public schools?

ii. What are the challenges that schools and educators encounter when serving this population?

iii. What educational strategies, practices, and policies can be recommended to enhance the educational achievement of Hispanic students?

To answer these questions, a combination of qualitative and quantitative methods is used. Table 3.1 summarizes the research methods applied to each question and their specific purpose. A combination of Hierarchical Linear Modeling (HLM) and case studies is applied to analyze school and student determinants of achievement among Hispanics. First, HLM analysis is used to analyze the effect of six major variables on achievement. Selection of these variables is based on theoretical relevance and data availability. HLM is particularly suitable to analyze student data because they capture the nested nature of academic achievement. Empirical research has consistently shown that students within a particular school tend to be more similar in terms of an outcome variable than they are to students in a different school (Rumberger & Palardy, 2004; Coleman et al, 1966). As a statistical method, HLM permits partitioning the error variance by level of analysis. That is, within schools, between schools, and over time, thereby giving an appropriate estimate of the variability of regression coefficients. Recognizing that achievement is

influenced by many attributes, and that the variables analyzed through the HLM method are by no means exhaustive in explaining student performance, additional factors are investigated in the case studies. Interviews with school staff, parents, school district officials, and local NGOs constitute the data for the case studies. In addition to identify achievement determinants, HLM and case studies have specific purposes. While HLM is intended to identify and compare relative effects associated to certain variables, interviews are aimed to provide a more comprehensive understanding of the mechanisms by which particular factors influence student achievement. That is, HLM allows seeing *to what extent* a factor affects achievement, whereas interviews provide insight on *how* that factors affects performance.

Table 4.1 Research design

Question	**Research method utilized and purpose**		
	HLM	**Interviews**	**Observation/field notes**
What are the effects of student/school attributes on achievement of Hispanics?	Identify individual and school effects of six variables *What* *To what extent*	Identify additional factors not included in HLM analysis *What* Illustrate mechanisms by which identified factors affect achievement *How*	
What are the main challenges?	Distinguish more influential variables *How much*	Characterize most relevant challenges according to principals, teachers & parents *What*	Confirm/disconfirm/ complement interviews and HLM
What strategies and policies may enhance achievement?		Recognize and describe successful strategies *What, how*	Confirm/disconfirm/ complement interviews and HLM

The second and the third questions are mostly addressed through interviews with school staff and parents, which were explicitly asked about the major challenges they encounter in relation to educating Hispanic students. Interviews and participant observation were also used to recognize and characterize strategies that have been successful to enhance student achievement in the schools visited. Interview protocols for each interviewee type are included in Appendix B . Interviews are particularly well suited for this research because they allow studying people's understanding of meanings in their lived world, describing their experiences and self-understanding, and clarifying and elaborating their own perspective on their lived world (Kvale, 1994; Marshall & Rossman, 2006). Classroom observation and field notes were complementary to the interviews performed. They were intended to reveal additional information about the services provided by schools as well as to confirm information obtained during the interviews. Lastly, the HLM analysis complements the qualitative methods applied to address the second and third questions. By identifying the most influential variables, in terms of the largest effects on achievement, HLM highlights those factors more urgent to address.

4.2 POPULATION OF STUDY

This study examines the school achievement of Hispanic students in Pennsylvania, a state with changing demographic composition. To address the first research question, Hierarchical Linear Models (also referred to as multi-level models) are utilized to examine the effects of student background characteristics and school attributes on individual performance of Hispanic students (research question 1). Then, four case studies are used to systematically identify challenges that

constrain school and educators as well as best practices to provide effective schooling to minority students (research questions 2 and 3).

The population of analysis for the multilevel analysis is Hispanic students enrolled in elementary public schools in the State of Pennsylvania. A representative sample of school districts was selected because the Pennsylvania Department of Education could not provide achievement data for students enrolled in the entire state. Thus, six districts with different percentages of Hispanic enrollment were selected. To select the sample, all districts in Pennsylvania were sorted according to their level of Hispanic enrollment, from lowest to highest. Six groups were created including districts with different levels of Hispanic enrolment. From each group one district was selected at random. This research concerns only elementary schools because Hispanic students are likely to be classified as English learners (ELL). Research has shown that educational needs of ELL students may greatly differ depending on their age and school grade (Williams, 2007). Hence, only elementary schools were examined to control for educational needs among Hispanic ELL students. The total sample comprises about 60 schools located in six districts and above 6,000 students tested in both math and reading for the years 2008-09, 2009-10, 2010-11.

For the case studies, four schools within one single district were selected. In order to control for differences in local administration and district educational policies, all four schools were purposely chosen from the same school district. Two criteria were used to select the district: a) a considerable proportion of Hispanic students enrolled so the population of interest was well represented at the school level; b) a medium to large size district so that the identity of students could be kept anonymous when studying specific schools. The selection of schools followed a strategy of maximum variation to include schools with different levels of

performance. The schools selected are very similar in their concentration of Hispanic students, poverty level, and proportion of English learners but differ in the overall achievement level as measured by Pennsylvania System of School Assessment test. The purpose was to control for demographic characteristics of the student body in each school. Two out of the four chosen schools made adequate yearly progress (AYP) during the academic year of 2010-2011, which indicates Pennsylvania achievement goals were met for this year and have a trajectory of high-achieving schools in previous years. These schools are considered as high-achieving in this study. A third school was considered as "making progress" because achievement goals were not met during the last year and actions have been taken to improve performance. This school illustrates a medium performance level. The last school selected was undergoing a series of corrective actions. Specifically, this school was implementing a comprehensive assessment of goals and strategies because achievement goals had not been met during the last five years. This school is considered as low-achieving. Mean and standard deviations of math and reading achievement are provided in the analysis chapters.

4.3 DATA COLLECTION

Data collection was done in two stages. First, all demographic and achievement data utilized in the multilevel analysis were collected. Interviews and observation, the methods used to collect information during the case studies, took place only after the multilevel analysis was concluded. The purpose was to obtain a general picture of determinants of achievement and then utilize interviews and observation to refine the interpretation of the previous results and discover new factors not included in the statistical analysis. In this way, each research method is used to

answer different research questions but also complement and corroborate findings obtained in each stage of the analysis.

4.3.1 Hierarchical Linear Modeling

Requests for data on student achievment and bacground characteristics were made to the Pennsylvania Department of Education (PDE) and released through the Bureau of Assessment and Accountability. Information on perfomance, English language profiency, economic status, and enrollment time at specific school was obtained for individual students enrolled in the six school districts previously selected. For the multilevel analysis, demographic and performance data were obtained from the Pennsylvania System of School Achievement (PSSA) test, which measures how well students in Pennsylvania public schools perform in reading and math. This test is applied annually in March and April in school grades third, fourth, fifth, sixth, seventh, eight, and eleventh. All students are required to take the test unless they have less than one year enrolled in an American school, in which case they are considered newcomers. Newcomers are exempt from taking the reading test during their first year in the U.S. but are obliged to take the math part. For the purposes of this study, only standarized scores obtained in math and reading are considered since those are the subject areas tested at elementary school grades. Students who take the modified versions of the PSSA (PSSA-M) were excluded from the analysis in order to use a single measurement instrument as indicator of performance.[14]

[14] The PSSA-M test is used in lieu of the PSSA for special education students. According to the Pennsylvania Department of Education, this test is less cognitively complex and shorter than the standard PSSA. The PSSA-M Math test started being used beginning in 2009-10, and the modified Reading test started in 2010-11. The eligibility to take the PSSA-M rather than the standard PSSA is determined by the student's Individual Education Program (IEP).

In addition to student achievment data, information on school socieoconomic status and ethnic composition was gathered. Specifically, data on enrollment and segregation by income and race was provided by the Division of Data Quality and the Division of Subsidy and Data Administration of the Pennsylvania Department of Education. The purpose of this data was to assess the association between school size and school enrollment on school achievement. Both student and school data cover the academic years of 2009-10, 2010-11, and 2011-2012. For student achievement data all student names are omitted and replaced by numerical identifiers.

4.3.2 Case studies

In order to perform the case studies, the researcher first obtained permission from the University of Pittsburgh's Institutional Review Board. Then, a letter explaining the purpose and requirements of this study was sent to the district's Superintendent. Once he granted permission to contact schools, additional letters were sent to four pre-selected schools (see Appendix A). Two out of the preselected schools, one high-achieving and one under corrective action, declined to participate in this study due to their workload and testing schedule. Two other schools with similar characteristics were invited and accepted to participate. Once in the schools, principals were interviewed first and then asked to refer to specific teachers for interviews and observation of instrucional time. Once the first teacher was interviewed, the following interviews were obtained following a snowball technique[15]. Most of the teachers interviewed hold a certification to teach as a English as a Second Language since those are more likely to work with English learners. Also, interviews include both Hispanic and Anglo teachers and assisstants from kindergarden to fifth grade, school counselors, and parent outreach. Parents were interviewed

[15] In snowball sampling the researcher identifies cases of interest from people who know people who know what cases are information rich. See Kvale, 1997 and Marshall & Rossman, 2006.

when they came in to the school for meetings and sometimes when they brought their children to school or at dismissal time. Often times the parent outreach introduced parents to the researcher to facilitate their collaboration.

For the case studies data was collected through semi-structured interviews with school principals, teachers, English language acquisition assistants, school counselors, parent outreach, parents, school district officials, staff from local community based organizations, and a case worker. Three different interview protocols were developed: teachers, school principals, and parents. All interviews are semi-structured and followed a predetermined protocol organized around five themes: personal background, education of Hispanics, relation between language and education, home-school communication, and social integration (see Appendix B for complete protocols). All interviewees were asked about the same themes although with slightly different questions. For example, when talking about parental involvement at school, teachers were asked about any activities they organize to communicate with families, whereas parents were asked about their attendance to these activities. The purpose of investigating the same themes with all the interviewees was to obtain a more comprehensive understanding and integrate and contrast different perceptions. In some cases, field notes were taken during the interviews to capture the environment and emotional context in which they took place. A total of 75 interviews were conducted. Interviews ranged from 13 minutes to 1 hour 43 minutes. In general, interviews with parents were shorter while interviews with school Principals tended to be the longest. Differences seem to be related to interviewees' availability and the interview setting. Parents visited schools usually for brief periods, either to drop their children in the morning or during dismissal time. In most of the cases, they were in a hurry and seemed to have just few minutes to talk, which posed a challenge to approach them. In fact, most parents were interviewed in school

surroundings or while the researcher walked them to their destinations. In contrasts, school Principals and teachers were always at school and asked for an interview in advance, which made them more likely to allocate a specific time to be interviewed. Interviews with them usually took place in a quiet office or a private space where no one but the researcher and the interviewee were present.

Interviews were conducted in English and Spanish. The researcher let interviewees decide the language to speak during the interview. Without exception, all parents preferred Spanish, although many of them included short phrases or words in English in their responses. Principals spoke all in English, the same as English-native teachers. Teachers and school staff who were first and second-generation Hispanics, parent outreach coordinators, and NGO staff used a combination of English and Spanish during the interviews.

The second component of data obtained during the case studies is observation of instructional time. Observation entails the systematic noting and recording of events, behaviors, and artifacts (objects) in the social setting chosen for study. About 20 hours of classroom observation were conducted. Observation periods ranged from 40 minutes to 2 hours and included teaching of math, science, and English language teaching. In all cases, school principals allowed the researcher to decide the grades and teachers to observe. Observation was also performed in a couple of recognition ceremonies. Double-entry field notes were used to register all observations. In the left column the researcher described everything that was occurring in a factual manner and trying to capture all relevant details. The right column was reserved for the researcher's comments and reactions to what she described in the left column. Field notes were organized by date, school, and activity observed. Double-entry field notes were intended to complement information gathered from the interviews, particularly to understand implementation

of the English Language program in each school and document teacher-student interactions. Observation served also to corroborate information previously obtained about teaching strategies and to document the classroom atmosphere. Particularly, the researcher observed students participation, peer interaction, student-teacher communication, and instruction delivery. Lastly, observation helped to raise new questions that were later asked to the teachers observed. To complement the information obtained, the researcher kept a personal record with her reactions, impressions, and thoughts to interviews and observation, which added 17 audio files. Such files were not transcribed but rather used to complement field notes, interviews, and observation.

4.4 DATA ANALYSIS

4.4.1 Hierarchical Linear Modeling

First Hierarchical Linear Models (HLM) are utilized to examine the effect of school and student characteristics on performance. Research has consistently shown that students within a particular school tend to be more similar to each other in terms of an outcome variable than they are to students in a different school (Rumberger & Palardy, 2004; Coleman et al, 1966). Statistically, it is necessary to use a technique that considers dependence of the outcome variable between people from the same group. HLM is a suitable method to address this issue because it takes into account the nested nature of student achievement. A central feature of this method is its ability to partition the error variance by level of analysis -that is within schools and between schools- thereby giving an appropriate estimate of the variability of regression coefficients (Bryk & Raudenbush, 1992).

This specific model used incorporates two levels of analysis: students and schools. Thus, estimates for student and school achievement are obtained. At level 1, four variables are included to account for student background characteristics and provide estimates of individual student achievement: Individualized Education Program, English language learner status, socioeconomic status, and geographical mobility. At level 2, two school level variables are included to assess their relationship to school achievement: ethnic segregation and school size. HLM procedures also permit test for heterogeneity of regression slopes of student predictors between schools. This enables an assessment of the extent and determinants of school-varying effects. In other words, it is possible to determine interactions between the effects of the student background and school characteristics. These interactions are called cross-level effects.

A wide range of multilevel models can be used to do educational research. The choice depends on the research questions and the type of data available. For this research, an intercepts-and-slopes-as-outcome model was used to predict the achievement among i = 1,…, p Hispanic students which are grouped within each j=1,…q, public elementary schools in the six selected districts. The model specification and a detailed description of all variables used are explained in Chapter 5, which presents the results of the statistical analysis. The HLM7 statistical package was used to conduct all models.

4.4.2 Case studies

Qualitative methods of inquiry are appropriate to tackle the second and third research questions of this study. According to Marshall & Rossman (2006), the purpose of qualitative studies is the description and interpretation of themes in the subjects' lived world. Interviews are particularly well suited for this research because they allow studying people's understanding of meanings in

their lived world, describing their experiences and self-understanding, and clarifying and elaborating their own perspective on their lived world (Kvale, 1994; Marshall & Rossman, 2006). Observation is also a fundamental method in qualitative inquiry. It is mostly used to discover complex interactions in natural social settings. Observation is particularly suited if the research topic concerns more implicit meanings and tacit understandings, like the take-for-granted assumptions of a group or a culture (Kvale, 1996). In the context of this research, teachers may declare that they do not have negative stereotyped conceptions about Hispanic students because saying the opposite would be politically incorrect or because they are not aware of it. However, through observation it is possible to identify attitudes and examine their congruence with what people say.

Interviews and observation *in situ* constitute the raw material to analyze in the case studies. A total of 75 interviews were conducted and tape-recorded with permission of the interviewees. Interviewees' identity is kept confidential at all times; audio files were saved following a typology using a school identifier, type of interviewee, and a sequential number. For instance, School1_teacher_2 stands for the second teacher interviewed in the first school visited.

Interview analysis began with verbatim transcriptions of all audio files. No translation was done in the transcriptions. Rather, specific fragments of interviews conducted in Spanish were translated when used as quotes. All transcriptions were imported to Atlas.ti, a software for qualitative research analysis, and then grouped into different families: Principals, teachers, parents, parents outreach coordinators, and others (which include staff from community organizations). In this way, it was possible to compare and contrast responses to specific questions across different types of interviewees. The next step consisted of coding all interviews, which consist of highlighting important quotations and then assigning them a code. The process

of coding involves attaching one or more words to a segment of written text to permit later identification of a statement. The grounded theory approach to qualitative research identifies various types of codes: open, axial, and categorical. Open coding, which "refers to the process of breaking down, examining, comparing, conceptualizing and categorizing data" (Strauss & Corbin, 1990, p. 61), was the method employed in this research. As Kvale and Brinkmann (2008) make clear, the process of coding can be either concept driven (deductively created), or data driven (inductively created). This last approach is particularly used in grounded theory. Concept-driven coding used codes that have been developed in advance by the researcher, either by looking at some of the material or by consulting with the existing literature in the field. In data-driven coding the researcher starts out without codes, and develops them through readings of the material.

In this research, a combination of both approaches was used in the coding process. A total of 154 codes were created. About 23 percent of the codes, (34) were created deductively. These codes were created based on the interview themes, which were in turn derived from empirical studies on achievement of minority students. These codes are mostly related to eight topics: values about education, values about language, parent-school communication, student performance, language instruction program, social integration, main challenges to educate Hispanics, and successful strategies to educate Hispanics. The remaining 110 codes (77 percent) emerged from the data, that is, were grounded or inductively created. Examples of data-driven codes are Hispanic subcultures, dependence on the government assistance, and community violence. Appendixes B and C show the interview protocols used for all the different types of interviewees and the code list with frequencies of occurrence, respectively.

Once all the codes were created, the next step in data analysis was the creation of 31 memos. According to Kvale (2009), memos are spaces for reflection, analysis, integration and interpretation of texts and accompany the process of coding. In other words, they are intended to make sense of data. Three main types of memos were applied in this research: theory, those discussing relationships and patterns between codes; commentary, those pertaining to the researcher's thoughts about organization and methodology; and third, definition, those memos specifying descriptions for the codes used. In turn, memos were linked to specific codes, quotations, and memos themselves in order to facilitate analysis of related themes. In this way, all interpretations of qualitative data in this research are assured to be grounded on evidence.

4.5 LIMITATIONS OF THE STUDY

Some limitations of this research need to be mentioned. First, the analyses conducted here used a single outcome measure, standardized scores obtained in the PSSA test. Other outcome measures such as dropout and graduation rates would greatly enhance the analysis by providing a more comprehensive view of achievement. Second, since PSSA tests have been changing every year, it was not possible to follow individual trajectories for students because tests are not psychometrically comparable across years. Third, case studies were intended to identify additional determinants of achievement. In this regard, it would have been ideal to match parents' answers to their children's performance; in other words, associating the PSSA achievement level of children for which their parents were interviewed. Instead of this, parents were asked their opinion about how their offspring were doing at school, which may differ from students' performance as measured in standardized tests. Fourth, although many studies show

that Hispanic achievement is generally poor across educational levels, results from this research should be interpreted as representative of what occurs at elementary public schools. Even though Hispanics may face similar challenges in higher grades, the school dynamics and language-related problems are likely to be different. Fifth, the individual schools studied are located in a district with a high proportion of Hispanics. Academic challenges encountered by schools may differ, or be found in a different magnitude in school districts with smaller Hispanic presence. Ideally, the case studies were intended to cover two or three districts with different levels of Hispanic enrolment. Given limitations in time and budget, only one district was selected. Yet, this district helps to elucidate major problems and dynamics in districts experiencing considerable and fast changes in their demographics. Lastly, because an important proportion of students examined are English learners, some findings would be specific to this population. Caution must be used when trying to extrapolate findings from this research to the general population of English learners; that is, Chinese, Vietnamese, etc. While these students are similar in their need to developed English proficiency, ethnic origin, race, cultural background, and the mother tongue they speak are likely to pose specific challenges to each population.

The next two chapters present the quantitative and qualitative analyses. Determinants of achievement among Hispanic students are examined first. Then, major challenges that Pennsylvania public schools encounter to provide effective schooling to Hispanic students are illustrated. Last, best practices and policies are discussed.

5.0 DETERMINANTS OF HISPANIC ACHIEVEMENT IN PENNSYLVANIA PUBLIC SCHOOLS

The previous chapter outlined the broad map of immigration in the US and set Pennsylvania in the national context. Although not part of the top ten states experiencing the highest growth in Hispanic population, Pennsylvania has several counties undergoing a substantial increase of this group, which put pressure on local government to incorporate the newcomers and provide the services they need. Education of Hispanic students, in particular, poses an important challenge to public policy since: i) there is a considerable achievement gap between Hispanic students and White students; ii) Hispanic students are overrepresented among the population of English Language Learners; iii) Hispanic students remain more likely than any other immigrant group to come from disadvantaged families.

In order to appropriately understand and address related policy challenges, this chapter investigates student and school determinants of math and reading achievement among Hispanics in Pennsylvania elementary schools. It applies Hierarchical Linear Modeling to a state representative sample of 6,000 students who took the Pennsylvania System of School Assessment (PSSA), in the years 2009, 2010 and 2011. The main purpose of this chapter is to provide an overall picture of the determinants of performance of Hispanics in the entire state. It specifically characterizes the effects of six major student and school variables for which data are available, thus addressing the first research question of this study. In addition, this chapter

identifies the most influential variables, in terms of largest effects on achievement, which serve to recognize factors more urgent to address. Because student achievement is a complex phenomenon influenced by many factors, the next chapter will explore additional determinants of performance.

The next section discusses the research hypotheses and variables utilized in the multilevel analysis. Then, the model used is specified. Section four outlines some characteristics of the districts selected while section five analyzes the determinants of achievement of Hispanic students in Pennsylvania based on the model's results. The last section summarizes the main results of the HLM analysis and discusses some policy recommendations.

5.1 RESEARCH HYPOTHESES AND DESCRIPTION OF VARIABLES

In order to identify the determinants of achievement among Hispanics in Pennsylvania elementary public schools, a multilevel analysis is conducted. It is hypothesized that students' background and school context considerably influence educational outcomes at individual and school level. Specifically, four variables are used to represent students' background: individualized education program, English language proficiency, poverty, and geographical mobility. Racial segregation and school size are included as indicators of school context. Achievement is measured as the standardized scores obtained by Hispanic students on mathematics and reading for grades three, four and five in Pennsylvania elementary schools. Thus, achievement is considered the dependent variable, which is a continuous score. To define the population under study, the U.S. Census definition is used: Hispanic is defined as a person of

Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.

All variables used to represent student background are dichotomous, that is, they take only two values. The first variable included in the analysis is *individualized education program* (IEP), which indicates whether a student has a learning disability. According to the Individuals with Disabilities Education Act (IDEA), any student who has a learning disability has the right to have an individualized education program so their educational needs are better addressed. A child has a learning disability when he does not meet the typical education milestones or when he is unable to meet State-approved grade standards in written and oral expression and math and reading skills. Because having a learning disability implies that children may take longer in acquiring content, it is expected that students with an IEP will make slower progress. Thus, Hispanic children classified as needing an IEP are expected to show lower performance than their Hispanic peers without learning disabilities. This variable is coded as 1 if the student is classified as IEP and 0 otherwise.

A second variable is *English Language Learner status* (ELL), which is an indicator of English proficiency. The No Child Left Behind Act defines English Language Learner (ELL) as a student: a) age 3 to 21; b) enrolled or prepared to enroll in an elementary or secondary school; c) not born in the United States or whose native language is not English; e) from an environment where a language other than English has had a significant impact on an individual's level of English language proficiency; f) migratory and who comes from an environment where English is not the dominant language; and g) has difficulties in speaking, reading, writing, or understanding the English language that may deny the individual the ability to meet the state's proficient level of achievement and the ability to successfully achieve in classrooms where

English is the language of instruction (NCLB, 2002, Title IX). Students in Pennsylvania are classified as ELL based on their English proficiency as measured by the ACCESS for ELLs test (Assessing Comprehension and Communication in English State to State for English language learners). Because English Language Learners (ELL) must not only achieve English proficiency but also learn academic content and keep pace with English-only students as they advance to higher grades, we expect this variable to negatively affect performance. This variable is coded as 1 if the student is classified as ELL and 0 otherwise.

The third variable used to examine student background characteristics is *poverty*. The Pennsylvania Education Department classifies a student as economically disadvantaged based on their eligibility for the National School Lunch Program. This variable is coded as 1 if a student is economically disadvantaged and 0 otherwise, and is expected to have a negative impact on achievement. A number of studies show that disadvantaged students are more likely to be raised in circumstances associated with below average academic performance, such families with only one parent present and lack of access to quality day care. These students may also have fewer books at home, have parents with few years of formal schooling, and experience distressed conditions at home, all factors likely to negatively impact school achievement (Aud, Fox, & KewalRamani; 2010; Lopez, 2009).

The last indicator of student background is, *mobility,* which assesses the relation of geographic mobility to performance. It is coded as 1 if a student is enrolled for less than a full-academic year at the school where she/he is tested and 0 otherwise. Contrary to the previous cases, there are few studies that directly examine the relationship between geographical mobility and student achievement. In general, mobility is found to occur more frequently in segregated schools where students confront many interrelated challenges to succeed academically. Orfield et

al (1997) found that in highly segregated schools parents tend to be far less educated; students are much more likely to have serious development issues and untreated health problems; and they tend to move much more in the middle of a school year, losing continuity and denying schools sufficient time to make an impact on their learning. A specific theoretical contribution of this research is the systematic assessment of the relationship between geographical mobility and student achievement. Because higher mobility poses additional challenges to teachers and students to make academic progress and meet learning goals, this variable is expected to have a negative effect on performance.

Finally, *segregation* and *school size* are used to examine the impact of school characteristics on achievement of Hispanic students. Segregation is measured as the percentage of Hispanic students enrolled in each school considered. Hispanic families tend to settle in highly segregated and deeply impoverished urban settings. Consequently, Hispanic students are more likely to attend schools with fewer resources and institutional anomie, which in turn negatively impacts their achievement (Alba & Silberman, 2009; Suarez-Orozco, 2008, 2010). Because racially segregated schools are less likely to have sufficient and qualified educational resources, we expect these schools to show lower performance than more ethnically diverse schools. School size is also included in the analysis and is measured as the total school enrollment. Empirical studies suggest that smaller schools have clear advantages over larger schools when serving minority students (Finn, 1989; Holland & Andre, 1987). Smaller schools offer personalized attention, more opportunities for parental involvement, less anonymity of students, and a more caring environment, all elements associated with better student performance. Because Hispanic student are often times disadvantaged, school size is hypothesized to have a negative impact on their achievement. Table 4.1 summarizes the variables used in the analysis.

Table 5.1 Description of variables

Variable	Variable description	Variable values	Expected relation to achievement
Math achievement	Standardized scores obtained in Math for grades 3, 4, and 5.		Outcome variable
Reading achievement	Standardized scores obtained in Reading for grades 3, 4, and 5		
ELL	English Language Learner (ELL) Status	1 = ELL; 0 = Non ELL	Negative
IEP	Individualized Education Plan/Not gifted	1=student under IEP or classified as not gifted; 0=otherwise	Negative
Poverty	Family socioeconomic status measured as student eligibility to receive free or reduced lunch	1=student considered economically disadvantaged; 0=Otherwise	Negative
Mobility	Measures whether a student has been enrolled for less than full-academic year in school	1=student enrolled for less than full academic year; 0=enrolled for full academic year	Negative
School size	Total enrollment in a specific school		Non specified
Segregation	Percentage of Hispanic students enrolled at each individual school	0 to 100	Negative

Expected relationships between the variables described above can be summarized in terms of hypotheses. The first four correspond to student achievement while the last two refer to effect on school achievement.

Student-level effects

H_1. Lacking English proficiency poses an extra burden among Hispanic students. Thus, being classified as ELL has a negative impact on achievement of this group.

H_2. Students with any type of learning disability require extra help to acquire content. Hence, they will be expected to receive lower scores on standardized tests than students without any learning disability.

H_3. Economically disadvantaged students lack important resources to succeed academically. Therefore, they are expected to receive lower scores on standardized tests than their affluent peers.

H_4. Students who move frequently are more likely to have interrupted schooling, thus losing continuity and denying schools sufficient time to make an impact on their learning. Hence, mobility is expected to be negatively associated with achievement.

School-level effects

H_5. Small schools offer more personalized attention and a friendlier environment, both important characteristics to enhance the educational achievement of minority students. Thus, school size is expected to have a negative relationship with the achievement of Hispanic students.

H6. Racially segregated schools show high levels of poverty among students and have less qualified teachers. Thus, highly segregated schools are more likely to have lower performance scores than do diverse schools.

5.2 MODEL SPECIFICATION

To test the hypotheses above specified, several two-level HML models were conducted for each academic year. Because the standardized scores reported by the PSSA are not comparable between subjects and across years, it was necessary to conduct separate analyses for each

subject, grade and year. Several models were tried before reaching the final full model,[16] which includes four student-level predictors (IEP, ELL, poverty, and mobility) and two school-level predictors (school size and racial segregation).[17] Also, several cross-level interactions are specified to examine the impact of school size and segregation on the relation between student background characteristics and achievement. All random effects were kept in the final models even when they were not significant to make the findings comparable between models.

Equation (1) and (2) together constitute the final model used to predict achievement in math and reading, in grades three, four and five, during the academic years 2008-2009, 2009-2010, and 2010-2011.

At the individual level (level 1), an *intercepts-and slopes-as-outcome* model was used to predict the achievement among $i = 1,\ldots,p$ Hispanic students which are grouped within each j=1,…*q*, schools. Thus, the outcome for case *i* is,

$$Y_{ij} = \beta_{0j} + \beta_{1j}(IEP_{ij}) + \beta_{2j}(ELL_{ij}) + \beta_{3j}(poverty_{ij}) + \beta_{4j}(mobility_{ij}) + r_{ij} \qquad (1)$$

where γ_{ij} is the average achievement for the Hispanic student *i* in school *j*; and $\beta_{0j} \ldots \beta_{4j}$ are coefficients for the intercept and each explanatory variable.

In this model, both the intercept and slopes are allowed to vary randomly across schools. Thus, the intercept β_{0j}. is a function of an average value, γ_{00}, plus a random effect associated with each school, u_{0j}. For this analysis, level-1 predictors are entered *uncentered* because zero

[16] Model building started with the simplest HLM model, the fully unconditional model or One-way ANOVA with random effects. Model 2 included all level-1 predictors but their effect was restrained to be fixed. Model 3 incorporates random effects to Model 2, thus creating a random-coefficients regression model with four level-1 predictors. Model 4 introduces school size as level-2 predictor in Model 3. Model 5 adds segregation as level-2 predictor in model 3. Lastly, model 6 adds both segregation and school size as level-2 predictors in model 3..

[17] Other level-2 predictors were tried during the model-building process but resulted insignificant and thus excluded from the final model. For instance, percentage of low income students and percentage of minority students (Native-American, Black, and Hispanic) enrolled in each school. Information on per pupil spending was not available at the school level and therefore was excluded from the statistical analysis as well.

values are meaningful. That is, the intercept β_{0j} is the expected outcome for a student who has zero values in level-1 predictors. Thus β_{0j} is the average performance of a non-ELL student, with no learning disabilities, non-economically disadvantaged and who has been enrolled for a full-academic year in school *j*.

The school level (level-2) equation estimates the effects of school attributes on the intercept and slopes. According to this model, the intercept and slopes are allowed to vary across schools while level-2 predictors explain this variability. This means that regression equations vary across schools and school size and segregation are entered to account for such variability. Both level-2 predictors are centered in the overall or grand mean.

$$\beta_{0j} = \gamma_{00} + \gamma_{01}(SCHSIZE_{ij}) + \gamma_{02}(SEGREG_{ij}) + u_0 \quad (2)$$

$$\beta_{1j} = \gamma_{10} + \gamma_{11}(SCHSIZE_{ij}) + \gamma_{12}(SEGREG_{ij}) + u_1$$

$$\beta_{2j} = \gamma_{20} + \gamma_{21}(SCHSIZE_{ij}) + \gamma_{22}(SEGREG_{ij}) + u_2$$

$$\beta_{3j} = \gamma_{30} + \gamma_{31}(SCHSIZE_{ij}) + \gamma_{32}(SEGREG_{ij}) + u_3$$

$$\beta_{4j} = \gamma_{40} + \gamma_{41}(SCHSIZE_{ij}) + \gamma_{42}(SEGREG_{ij}) + u_4$$

β_{0j} is the average of subjects with zero values in all predictors *j* an $\beta_{1\ldots}$ β_4 are the coefficients for each school-level variable. The intercept, γ_{01} tells us whether small schools differ from big schools in mean achievement (controlling for segregation). Similarly, γ_{02} shows whether racially segregated schools differ from diverse schools in mean achievement (controlling for school size). This model also includes several cross-level effects ($\gamma_{11}\ldots\gamma_{41}$ and $\gamma_{12}\ldots\gamma_{42}$), which test whether the effects of a student's background on achievement vary with school size and

ethnic composition. For instance, γ_{11} estimates whether having a learning disability affects students' achievement differently in small and large schools, after controlling for all other predictors. Similarly, γ_{12} tests whether being disabled has a different effect on achievement in diverse schools than do in segregated schools, after controlling for all other predictors.

5.3 CHARACTERISTICS OF THE SELECTED SCHOOL DISTRICTS

Six districts comprise the sample used in this analysis. As explained in the methodology, the districts were randomly selected from groups with different proportions of Hispanic enrollment. Because Hispanics are the population of study, the sampling method purposely seeks to include districts with distinct levels of Hispanic enrollment so the results are representative of the state demographic composition. Figure 5.1 illustrates the main characteristics of the selected districts. Hispanic enrollment in these districts goes from 3 percent, in Central Bucks, to 77 percent in Reading SD. Unsurprisingly, poverty moves in the same direction tas Hispanic enrolment; as empirical studies has shown, race/ethnic segregation is highly correlated with income segregation (Orfield et al, 1997). The percentage of students meeting PSSA standards, measured as the sum of the percentage of students scoring proficient and advanced in math, differs by district. This time, the relationship with Hispanic enrollment and poverty is opposite. Central Bucks district has the highest percentage of students meeting PSSA standards and the smallest proportion of Hispanics and students living in poverty. The lowest performance is found in Lancaster, where just half of its pupils score proficient or advanced; Hispanic enrollment in this district is 57%.

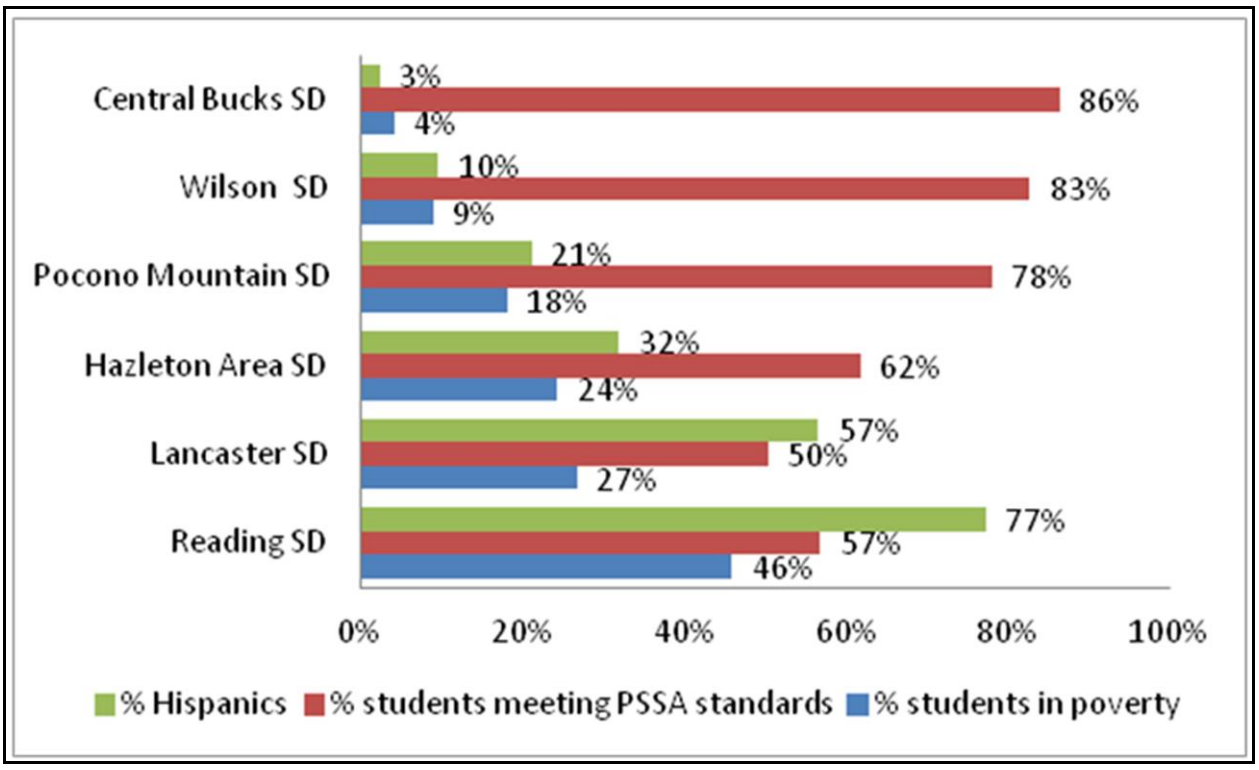

Figure 5.1 Hispanics, poverty, and achievement

Source: Data on students meeting PSSA standards and students in poverty came from the openPAgov.org project, an independent, non-profit research and educational institute. Data on Hispanic enrollment was obtained from the Pennsylvania Department of Education.

Figure 5.2 compares per pupil spending in the selected districts during the last decade. It would be ideal to include per pupil spending as school variable in the Hierarchical analysis. However, this information is not available for individual schools, the level of disaggregation needed for multilevel analysis. Despite this limitation, available data is sufficient to contextualize spending in all selected districts. Since 2000, school spending has steadily increased each year. A decade ago, Wilson SD, Central Bucks, Pocono Mountain, Lancaster, and Hazelton spent very similar amounts of money per student. This trend continued until 2005, when Pocono Mountain and Lancaster began spending more per student. Overall, all selected districts were below the state average per pupil spending in 2000. A decade later, Pocono Mountain has increased its

spending above the state average while Lancaster invested very similar amounts than the state average. Currently, there is not a clear correlation between per pupil spending and ethnic composition of the student body in these districts. The two districts with highest spending, Pocono Mountain and Lancaster, have 21% and 57% of Hispanic enrollment. With almost identical levels of spending, Central Bucks (3% Hispanic) and Wilson (10% Hispanic) follow next. Reading district, with the largest Hispanic enrollment (77%), is not far from the spending levels of the least Hispanic districts. Hazelton (32% Hispanic), experienced the smallest increase in per pupil spending over the years and was at the bottom of the group by 2010.

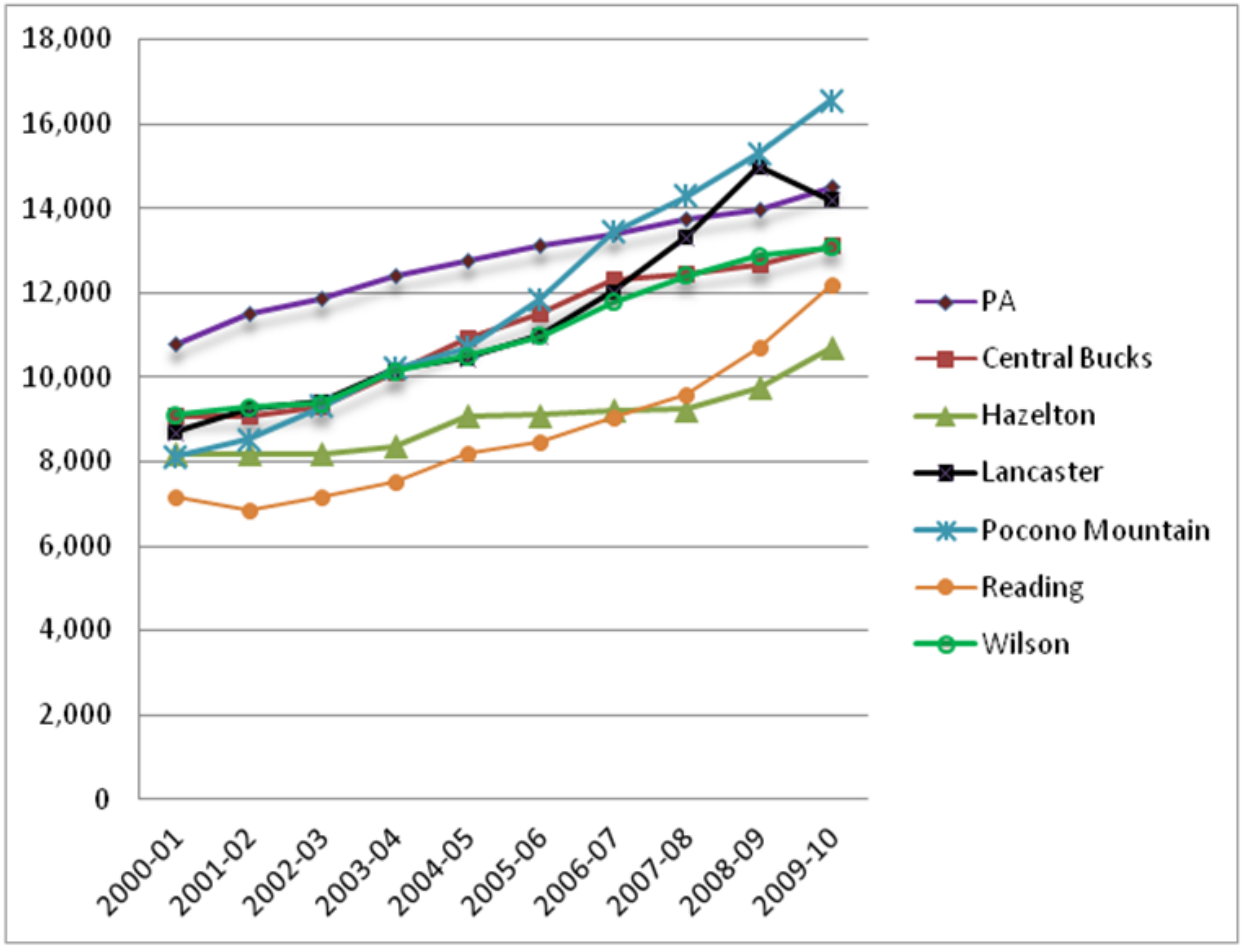

Figure 5.2 Per pupil spending

Note: Spending is adjusted for inflation. Source: openPAgov.org

Figure 5.3 illustrates cost per student meeting the PSSA goals. This time, there is a clearer trend between achievement and Hispanic enrolment. Those districts with fewer Hispanics have lower costs than those which are predominantly Hispanic. This trend is not surprising. From figure 5.1 we observed an inverse relation between Hispanic enrollment and achievement in the selected districts. Given the lower number of students who score proficient or advanced in largely Hispanic districts, the cost per student in meeting PSSA targets there is higher. It is interesting, though, that the Reading district does not have the highest costs per student despite it has the largest Hispanic enrolment. In fact, its costs per student are similar to those of Pocono Mountain, a district with only 21% of Hispanics.

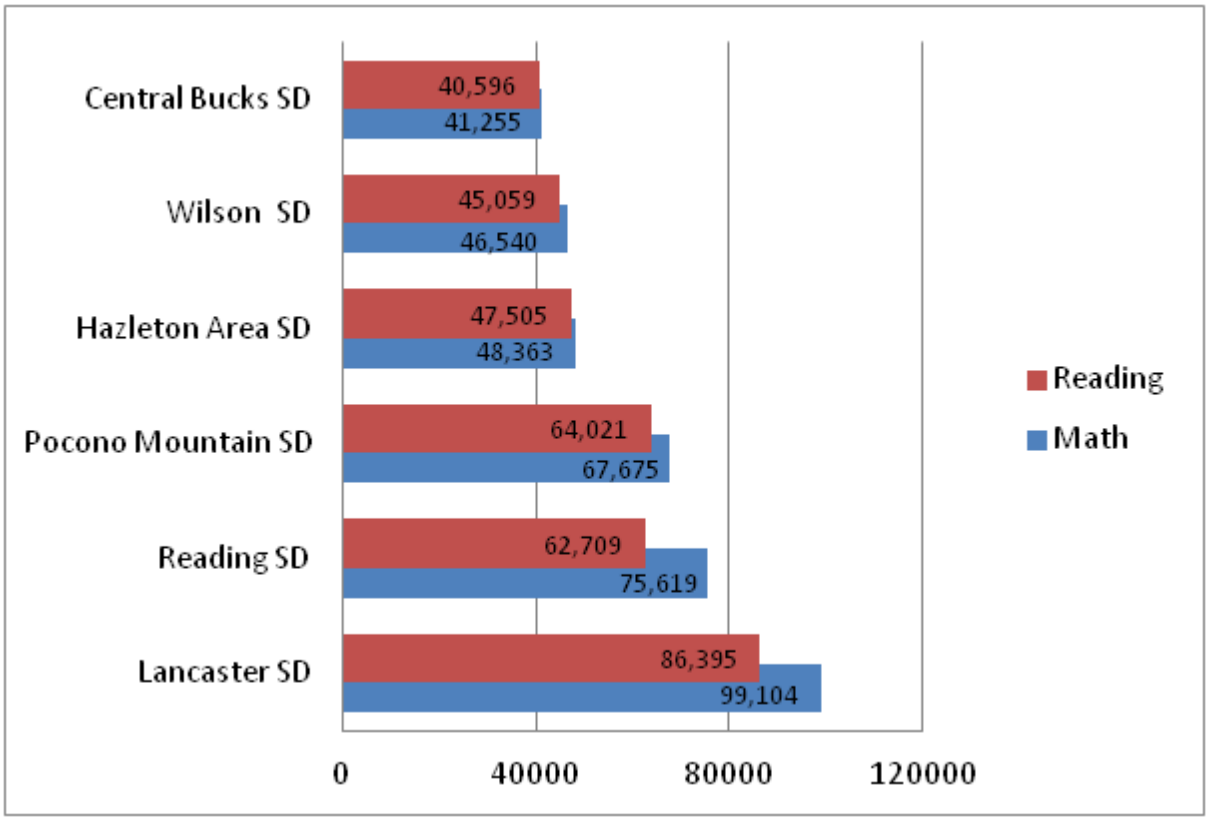

Figure 5.3 Cost per student meeting the PSSA targets

Note: Cost per student meeting PSSA is calculated as the total district expenditures divided by the sum of all students who scored proficient and advanced in the math test. Total expenditure is adjusted for inflation. Source: openPAgov.org

5.4 SCHOOL AND STUDENT DETERMINANTS OF ACHIEVEMENT OF HISPANIC STUDENTS

5.4.1 Descriptive analysis

Table 5.2 provides descriptive statistics for all explanatory variables considered in the multilevel analysis. Among all Hispanic students examined an overwhelming majority struggle

economically –about 87 percent each year.[18] Also, about one-fourth of Hispanics are not proficient in English; about one-sixth have a learning disability; and about one-tenth do not attend the same school for the minimum of a full-academic year. Although these figures are based on six school districts, they are representative of all Hispanics enrolled in Pennsylvania elementary schools since random sampling was used. Averages for school-level variables are also reported. Because math and reading are tested in all schools considered, the average school size and segregation is the same for both subjects. Schools have an average enrollment of about 600 students although the standard deviation is considerable, approximately 240 students. With regard to segregation, about one-third of the enrollment in Pennsylvania elementary schools is Hispanic. Yet, there are important variations between schools as we can observe from the standard deviation of segregation across years.

Table 5.3 reports average achievement for different subgroups of Hispanics for each year analyzed. When all Hispanics are considered, the overall average performance is higher than the average performance for any of the subgroups (minimum of 1235 points and of maximum 1347). Among the different subgroups, the average achievement of economically disadvantaged Hispanics is the highest after the overall Hispanic achievement (minimum of 1223 points and maximum of 1329), followed by the achievement of Hispanic students who did not complete a full-academic year in a same school (minimum of 1167 points and maximum of 1242). Students who lack proficiency of the English language (minimum of 1107 points and maximum of 1221) and those who have a learning disability show the lowest performance among all four groups (minimum 1069 points; maximum 1220 points). These numbers suggest that being economically disadvantaged is not as negative a factor as ELL, IEP, or mobility. This trend applies for both

[18] Comparing the number of level-1 observations to number of economically disadvantaged students for each year and subject.

reading and math across all years examined. It can be observed that average achievement for all groups tend to increase across years

Table 5.2 Descriptive statistics

Variable	2008-2009		2009-2010		2010-2011	
	Reading	**Math**	**Reading**	**Math**	**Reading**	**Math**
IEP students	1017	1025	1008	950	795	815
	16.84%	16.76%	16.4%	15.45%	13.6%	13.73%
ELL students	1591	1675	1687	1733	1595	1670
	26.35%	27.4%	27.45%	28.18%	27.29%	28.14%
Disadvantaged students	5309	5377	5348	5335	5170	5240
	87.93%	87.95%	87.03%	86.76%	88.45%	88.29%
Mobile students	642	680	644	686	530	571
	10.63%	11.12%	10.48%	11.16%	9.07%	9.62%
Average school size*	626.27		622.17		612.94	
	(250.16)		(239.94)		(241.09)	
Average segregation	36.22		36.90		38.15	
	(31.28)		(31.21)		(31.99)	
Number of observations						
Level 1(students)	6038	6114	6145	6149	5845	5935
Level 2 (schools)	63	63	64	64	63	63

Note. Standard deviations shown in parentheses

.

Table 5.3 Average achievement by Hispanic subgroup, academic year, and subject

Average achievement	2008-2009		2009-2010		2010-2011	
	Reading	**Math**	**Reading**	**Math**	**Reading**	**Math**
All Hispanic students	1234.84 (193.61)	1310.42 (200.59)	1245.96 (201.87)	1333.97 (204.17)	1261.58 (200.73)	1346.63 (208.60)
IEP students	1068.63 (170.91)	1172.28 (177.48)	1081.02 (189.75)	1200.35 (198.40)	1094.69 (184.97)	1219.68 (191.84)
ELL students	1107.16 (163.82)	1194.05 (169.05)	1117.27 (169.72)	1214.44 (168.72)	1116.67 (160.72)	1221.26 (169.31)
Disadvantaged students	1223.71 (190.66)	1300.31 (196.74)	1237.57 (199.65)	1329.00 (200.06)	1252.18 (197.48)	1337.89 (204.05)
Mobile students	1167.63 (188.30)	1223.83 (201.18)	1168.90 (197.183)	1231.82 (191.84)	1172.74 (200.21)	1242.49 (202.690)

Note: Standard deviations shown in parentheses

Restricted Maximum Likelihood coefficients and standard errors from the two-level HML analysis of math and reading achievement of Hispanic students in Pennsylvania elementary schools appear in Tables 5.4 to 5.6. Number of parameters and measures of model fit (Deviance and AIC) appear at the bottom of each table. The six columns display full models (Model 6) for math and reading achievement for grades three to five.

5.4.2 Hierarchical Linear Modeling

Table 5.4 summarizes the findings for the academic year 2008-2009. The intercepts γ_{00} indicate the overall average score in reading and math when all level-1 predictors are zero. That is, γ_{00} tells the average achievement of Hispanic students who are English proficient, not disabled, not economically disadvantaged and who complete an entire academic year in a single school, after controlling for school size and ethnic composition. Generally speaking, the average score

obtained by these students increases in higher grades while math scores tend to be higher than those obtained in reading. When tested in math, students scored 1359 points in third grade; 1470 points in fourth grade; and 1496 in fifth grade; when considering reading the average scores obtained were 1370 points in third grade, 1383 in fourth grade and 1382 in fifth grade. All student background characteristics (coefficients $\gamma_{10,}\gamma_{20,}\gamma_{30,}\gamma_{40}$) show to be significant predictors of student achievement in reading and math and across grades, with the sole exception of mobility in fourth grade. As expected, the effect of background characteristics on achievement is negative. When tested in third grade, disabled students scored134 points less than their non-disabled peers in reading and 141 point lower in math. This gap was of 193 points in reading and 167 points in math in fourth grade for reading and increased up to 233 points (reading) and 181 point (math) in fifth grade, after controlling for other background characteristics, school size and segregation.$\gamma_{30.}$

Table 5.4 Reading and math achievement of Hispanics, academic year 2008-2009

Fixed effects, Variance Components and Model Fit						
Explanatory variables	Reading 3 grade Coeff. (SE)	Math 3 grade Coeff. (SE)	Reading 4grade Coeff. (SE)	Math 4 grade Coeff. (SE)	Reading 5 grade Coeff. (SE)	Math 5 grade Coeff. (SE)
Mean achievement						
Intercept, γ_{00}	1369.65(9.3)***	1358.59 (12.99)***	1382.92 (13.61)***	1469.54(16.53)***	1381.86 (16.31)***	1495.76(18.17)***
School size, γ_{01}	-0.93(0.04)*	-0.06(0.06)	-0.02 (0.50)	0.01 (0.07)	0.02(0.06)	-0.02(0.09)
Segregation, γ_{02}	-0.79(0.29)**	-0.83(0.42)*	-1.02 (0.46)*	-1.27(0.47)**	-2.15 (0.51)***	-2.09(0.52)***
IEP slope						
Intercept, γ_{10}	-134.34(16.6)***	-140.53(20.74)***	-193.00 (19.74)***	-167.14 (18.81)***	-233.51 (16.79)***	-180.59(12.84)***
School size, γ_{11}	-0.12(0.05)*	-0.08(0.07)	0.08 (0.06)	-0.09(0.05)	-0.10(0.05)*	-0.06(0.04)
Segregation, γ_{12}	0.17(0.46)	0.04(0.52)	0.01 (0.52)	0.29(0.56)	1.12 (0.45)*	0.82(0.41)*
ELL slope						
Intercept, γ_{20}	-82.42(11.43)***	-83.98(16.87)***	-136.51 (18.12)***	-116.06(13.39)***	-161.77 (17.482)***	-106.16(18.21)***
School size, γ_{21}	-0.12(0.04)**	-0.12(0.06)*	-0.15(0.05)**	-0.11(0.04)*	-0.17(0.04)***	-0.11(0.07)*
Segregation, γ_{22}	-0.52(0.33)	-0.65(0.42)	-0.44(0.50)	-0.91(0.45)*	-0.83 (0.49)	-1.06(0.51)
Poverty slope						
Intercept, γ_{30}	-47.50(11.18)***	-47.40 (14.22)**	-62.55 (15.74)***	-51.78(18.25)**	-57.72 (16.61)***	-55.84(15.63)***
School size, γ_{31}	0.16(0.05)**	0.16(0.08)*	0.05(0.05)	0.03(0.05)	0.09 (0.062)	0.02(0.06)
Segregation, γ_{32}	0.035(0.34)	0.51(0.42)	0.38(0.50)	0.50(0.52)	0.620. (0.50)	1.17(0.46)*
Mobility slope						
Intercept, γ_{40}						
School size, γ_{41}	-74.76(15.06)***	-92.22(22.72)***	-30.67 (19.31)	-38.44(19.38)*	-60.10(26.76)*	-74.76(29.68)**
Segregation, γ_{42}	0.024(0.03)	0.06(0.05)	0.063(0.05)	0.03(0.06)	-0.07(0.07)	-0.00(0.07)
	0.63(0.39)	0.50(0.52)	-0.95(0.54)	-0.92(0.52)	0.54(0.72)	0.71(0.73)

Table 5.4 Reading and math achievement of Hispanics, academic year 2008-2009 (Continued)

Variance components						
Var. in school intercepts	1548.72	57.36***	3092.62*	6316.99**	5610.14***	10801.56***
Var. in IEP slopes	1935.01**	55.25***	211.10*	2391.93*	725.37	1558.07*
Var. in ELL slopes	1588.24***	45.18***	1503.36*	1117.96	907.62	2171.32**
Var. in poverty slopes	1798.06	61.37**	2387.15	2757.37	1976.25	2947.12*
Var. in mobility slopes	66.07	16.44	409.97	1037.95	3947.97*	1880.29
Var. within schools	12933.07	143.65	27664.66	29039.63	26171.72	26210.54
Number of parameters	31	31	31	31	31	31
Deviance (FIML)	25234.57	26652.81	26421.81	26755.48	25849.83	26210.54
AIC	25296.57	26714.81	26483.81	26817.48	25911.83	26271.54

Note. * p <.05 ** p <.01*** p <.001 All coefficients and standard errors of fixed effects, and variance components are calculated based on restricted maximum likelihood estimation. Numbers in parentheses are standard deviations

Similarly, lacking English proficiency significantly decreased student achievement in reading and math (coefficient γ_{20}) after controlling for segregation and school size. Reductions in achievement associated to being English learner ranged from 82 (third grade) to 162 points (fifth grade) for reading and from 84 (third grade) to 116 points (fourth grade) for math. Similar to the effect of being disabled, lack of English proficiency increasingly affects student achievement as students move to higher grades. As previous studies suggest, this analysis shows that poverty has a detrimental effect on achievement. Hispanic students are similar to other students in this regard. Hispanic students who are economically disadvantaged obtained lower scores than their more affluent peers across grades (γ_{30}). When tested in math, the difference was 47 points lower in third grade; 52 points in fourth grade and 56 points in fifth grade. For reading the gap was 47 points in third grade; 63 points in fourth grade; and almost 58 points in fifth grade. Geographical mobility turned out to be also a significant predictor of achievement among Hispanics. Being enrolled in a school for less than a full-academic year decreased the average reading scores of Hispanics by 75 points in third grade; by 31 points in fourth grade; and by 60 points in fifth grade. For math scores, the reduction was 92, 38 and 75 points in third, fourth and fifth grade, respectively. With the exception of mobility, all background characteristics examined have larger effects in higher grades. In other words, being disabled, not fluent in English and economically disadvantaged increasingly reduce the average achievement of Hispanics in both reading and math.

Significant contextual effects were found for both school size and segregation. School size affected the average school achievement in reading in third grade but not in subsequent grades (γ_{01}= -.93, $p<.05$). For one more student a school enrolls the school's mean achievement in reading among Hispanics decreases by .93 point. Similarly, ethnic segregation negatively

affected the school's average achievement in math and reading in grades three through five (coefficient γ_{02}). This means that diverse schools significantly differ from segregated schools in math and reading average achievement, after controlling for school size. One-unit increase in the proportion of Hispanics enrolled in a specific school reduces that school's average achievement in reading by.79 point in third grade, 1.02 points in fourth grade and 2.15 points in fifth grade. For math, one-unit increase in segregation decreases the school average achievement of Hispanics in .83 points in third grade; 1.27 points in fourth grade; and 2.15 points in fifth grade.

These findings are in agreement with previous studies (Orfield et al 1997; Rumberger & Palardy, 2004; Suarez-Orozco, 2008, 2009b) and suggest that Hispanics are similar to other students when considering the effects of ethnic segregation on achievement.

The analysis revealed various cross-level interactions. The effect of learning disability, English proficiency, and poverty varied across schools of different sizes. First, larger schools reinforce the effect that learning disabilities have on individual achievement. In other words, disabled students showed larger achievement gaps when compared to non-disabled students in bigger schools than they did in smaller school. Yet, this cross-level interaction is only significant for reading achievement in fourth (γ_{11}=-0.12, $p<.05$) and fifth grade (γ_{11}= -0.10, $p<.05$), after controlling for segregation. Although it seems negligible, these effects are additional to the main effect of having a learning disability (γ_{20} = -82.42). The most consistent cross-level interaction occurred between school size and English proficiency (coefficient γ_{21}). The effect of lacking English proficiency significantly varies with school size and gets reinforced in larger schools. Consequently, non-ELL students showed greater gaps when compared to their proficient peers in larger schools than did in smaller building (γ_{21}). By one-unit increase in school size, differences in reading scores of ELL and non-ELL Hispanics increased by 0.12 point in third grade; by 0.15

point in fourth grade; and by 0.17 point in fifth grade. When considering math, this difference increased by 0.12 point in third grade and by 0.11 point in fourth and fifth grade.

Contrary to this trend, school size ameliorates the effect of poverty for Hispanic third-graders in reading and math. This time, the positive sign of the coefficient γ_{32} indicates that one-unit increase in school size decreases the gaps between poor and non-poor Hispanics (main effect of poverty) by 0.16 point, both in reading and math. The effect of geographical mobility does not vary with school size. Geographical mobility did not vary, but rather depicts a consistent effect across schools of different size.

Figures 5.4 to 5.6 graphically display these interactions.[19] In the first two graphs large schools depict steeper slopes than do small schools because the effects of learning disability and English proficiency are reinforced in bigger schools. Figure 4.6 depicts the opposite pattern. School size ameliorates the effect of poverty thus reducing the gaps in reading achievement between disadvantaged and non-disadvantaged Hispanic students. The average size of schools was 626 students. Large schools are those one standard deviation above the average size (876 students) and small schools have 431students, one deviation standard below the average size.

[19] Figures 4.4, 4.5 and 4.6 were plotted using regression coefficients corresponding to reading achievement in third grade. Because the magnitude of cross-level effects are of similar magnitude for different grades and subjects, a single grade and subject was used as example to illustrate the main interaction patterns between student's background and school context.

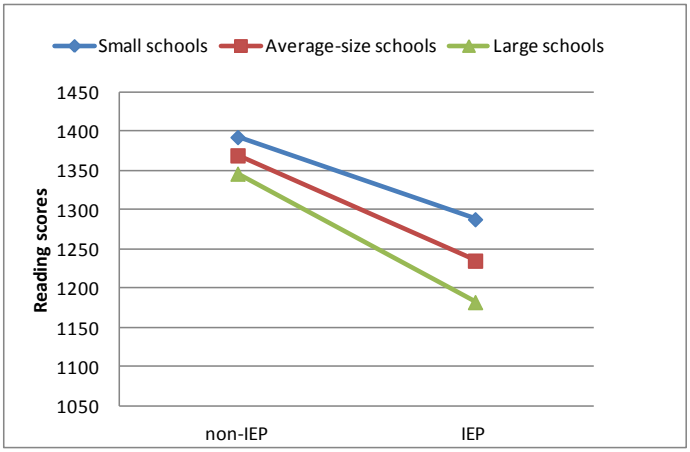

Figure 5.4 Effect of learning disabilities on reading achievement in schools of different sizes

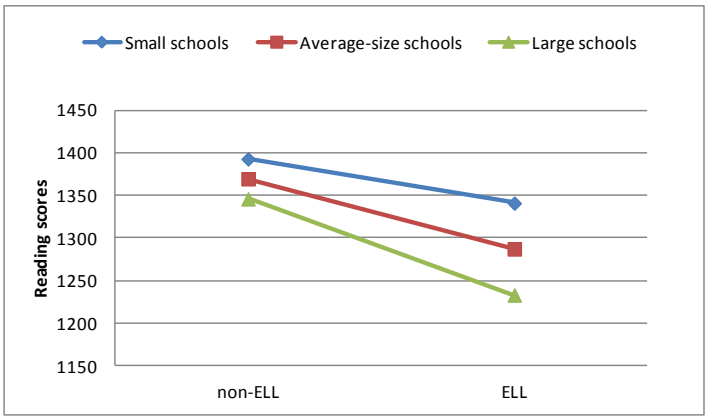

Figure 5.5 Effects of English proficiency on reading achievement in schools of different sizes

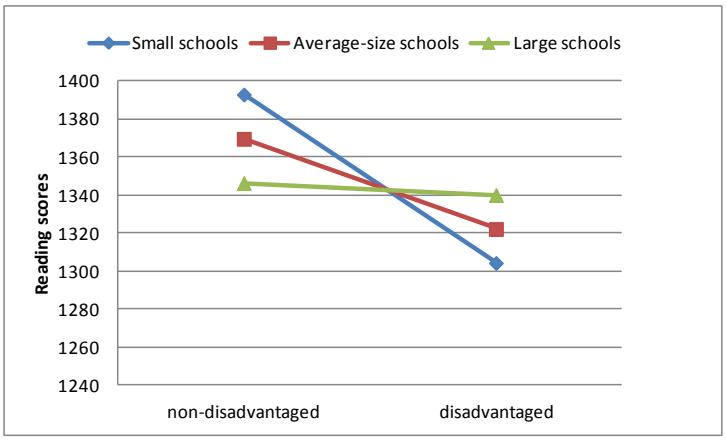

Figure 5.6 Effect of poverty on reading achievement in schools of different sizes

Similarly to school size, the effects of learning disability, language proficiency and poverty varied with the ethnic composition of schools while the effect of geographical mobility remains invariant in schools with different proportions of Hispanics. Ethnic segregation reinforces the effect of English proficiency in just one instance: math achievement in fourth grade (γ_{22}= -0.91, p<.05). That is, Hispanic students who lack English proficiency show bigger gaps in math achievement when compared to their English proficient Hispanic peers in schools that are ethnically segregated. This finding is congruent with studies advocating for integrating English learners with native speakers into single classrooms to boost the language development of the first ones. Although intuitive, this result was significant only in one instance during the entire academic year 2008-2009. Figure 4.7 shows that regression slopes for English proficiency are more pronounced in schools with higher concentrations of Hispanics, which relates with bigger gaps among ELL and non-ELL students in terms of standardized scores.

Interestingly, ethnic segregation ameliorated the effect of learning disability and poverty on student achievement in some instances. When a school's concentration of Hispanics increased by one percent, the gap between disabled and non-disabled fifth-graders (γ_{12}) diminished by 1.12 points when considering reading and by 0.82 point when considering math. Similarly, the gap between poor and non-poor Hispanic students decreased by 1.17 points every time a school increases its proportion of Hispanics by one-percent (γ_{32}=1.17 p<.05). Yet, this result was only significant for math in fifth grade. Although ethnic segregation ameliorated the effects of poverty and learning disability in a just few occasions, these findings are worth noticing as they seem counterintuitive given the vast literature documenting the detrimental effects of ethnic segregation on students' performance (Coleman et al, 1966; Ordfield, Beachmeier; Alba & Silberman, 2009; Suarez-Orozco, 2008). Figures 5 and 6 clearly illustrate that segregation does

indeed decrease the performance of Hispanic students, as the literature suggests. Yet, the magnitude of this reduction seems smaller for disabled or poor students than do for non-disabled or non-disadvantaged students. In fact, scores obtained by disadvantaged and disabled students show little variation across schools with different levels of segregation. The opposite seems to occur with scores obtained by non-disabled and more affluent students.

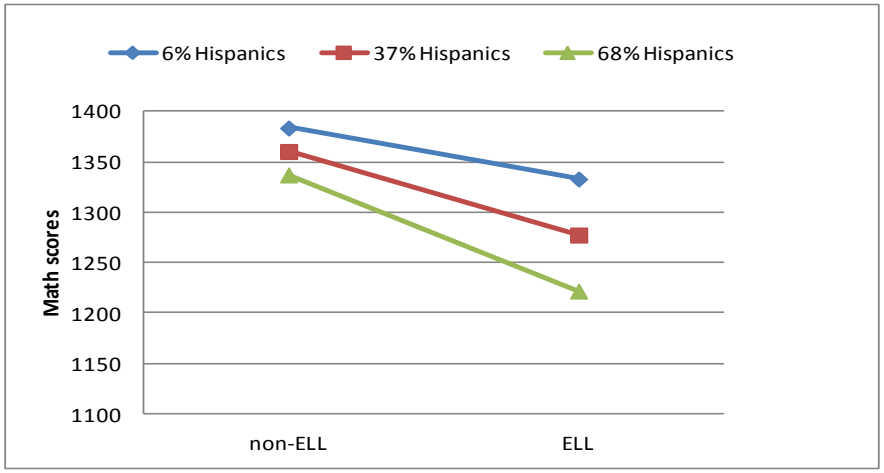

Figure 5.7 Effect of English proficiency on math achievement in schools with different proportions of Hispanics

Note. 37% is the overall average of Hispanic students enrolled in all schools examined. 6% corresponds to one standard deviation below the mean and 68% to one standard deviation above.

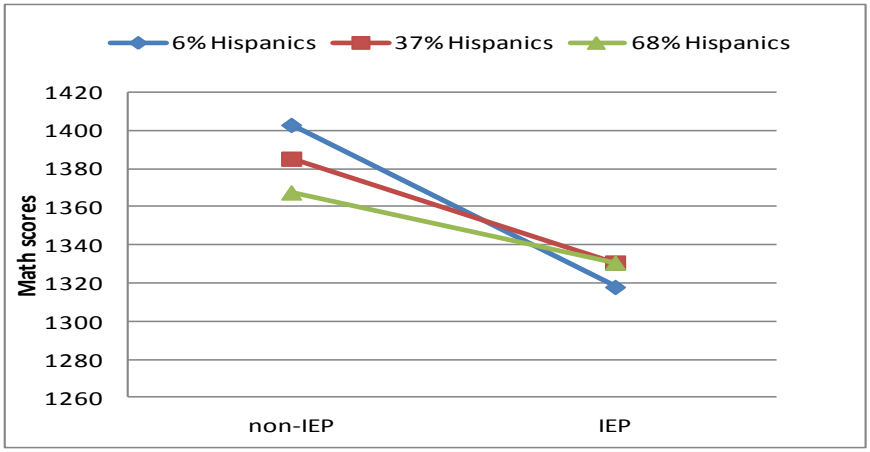

Figure 5.8 Effect of learning disability on math achievement in schools with different proportions of Hispanics

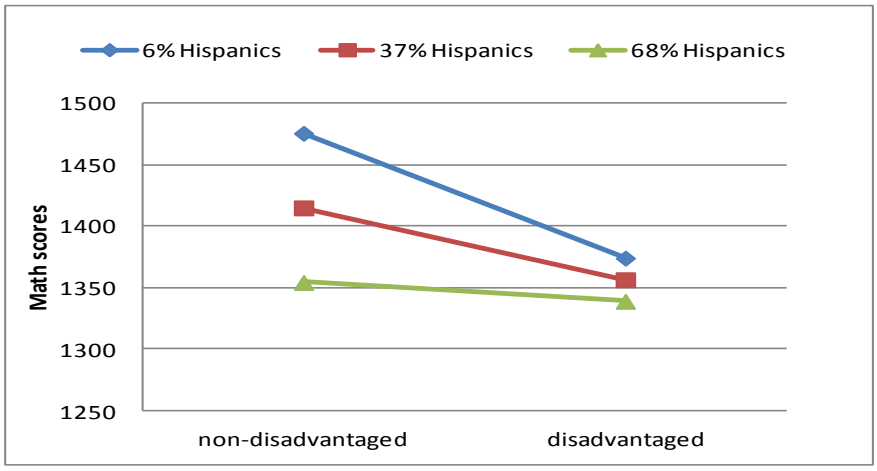

Figure 5.9 Effect of poverty on math achievement in schools with different proportions of Hispanics

The last section of Table 5.4 reports variance components for all models used. Across models, significant variation in the school mean achievement remained after adjusting for the IEP, ELL, poverty, mobility, school size and segregation. The only exception is the model conducted to examine math achievement in third grade. In almost all models, there was still a significant variation in the relationship between achievement and learning disability after controlling for all other level-1 predictors. In four occasions significant variation was still observed between English Language Learner status and achievement, after controlling for other

background characteristics. With regards to the relationship between poverty and achievement, there was significant variation after controlling for IEP, ELL and mobility in just two instances; math in third and fifth grade. Lastly, no significant variation remained between geographical mobility and achievement after controlling for other level-1 predictors.

Tables 5.5 and 5.6 present the results for reading and math achievement in 2009-2010, and 2010-2011.Overall, the main findings for the academic year 2008-2009 hold in subsequent academic years. Across the years various patterns become clear. Generally speaking, school average achievement (γ_{00}) gets higher in recent years, irrespective of school grade. This trend is more evident with regard to math achievement. Taking as example Hispanic fifth graders, their school average achievement in math was 1495 points in 2009, 1497 points in 2010, and 1508 points in 2011. These numbers indicate that overall Hispanic achievement improved in Pennsylvania during these years. In most of the cases school mean achievement in math is higher than school mean achievement in reading, which is intuitive. Reading achievement relies more heavily on language development and vocabulary than does math achievement. Since about a fourth of the Hispanics in Pennsylvania are not proficient in English (Table 5.2), the lower achievement of this subgroup affects the average performance of the entire Hispanic population.

All student background characteristics proved to be significant predictors of math and reading achievement of Hispanics for all years and grades examined. In all cases, the impact of student background characteristics is negative, which confirms the hypotheses formulated earlier with regard to the expected individual-level effects (H_1 through H_4). In general, the impact of learning disabilities (IEP), English proficiency (ELL), and poverty on achievement increases in higher grades for both mathematics and reading. Because all these effects are negative, achievement gaps between different subgroups of Hispanics tend to increase as they advance in

their attainment. Taking ELL as an example, Hispanics who are not proficient in English have increasingly lower scores across grades than those Hispanics who have good command of the English language. Mobility, on the other hand, does not show a clear pattern across grades.

When considering the magnitude of the effects of background characteristics on achievement, having a learning disability has the largest effect on achievement across grades and years, for both reading and math achievement. Proficiency in English shows the second largest effect on achievement, followed by mobility. Among the background characteristics analyzed here, poverty shows, relatively, the smallest effect on achievement. With the exception of mobility, IEP, ELL and poverty have larger impacts on reading achievement than do on math performance. This trend is present across all grades and years examined. Mobility, on the contrary, shows a greater impact on mathematics than in reading.

Across the years examined, few differences appear in the school-level effects. School size does not affect the overall school mean achievement either in reading or mathematics for any grade and year. On the contrary, segregation does impact the school mean achievement in reading and mathematics in all grades and years. In all cases the coefficient γ_{02} is negative, which indicates that Hispanics who are non-disabled, English proficient, non-disadvantaged and non-mobile obtain lower math and reading scores in segregated schools than do in more diverse schools context. This finding confirms hypothesis six.

Among the various cross-level effects found the interaction between school size and English proficiency was the most consistent across years and grades. School size reinforces the association between English proficiency and achievement and indicates that achievement gaps between ELL and non-ELL Hispanics are larger in bigger schools. In other words, smaller schools ameliorate the negative effect that lack of English proficiency has on achievement.

Similarly, school size reinforces the association between learning disabilities and achievement. Although only significant for third grade during the 2008-2009 cycle, this result indicates that gaps between disabled and non-disabled Hispanics are smaller in smaller schools or that smaller schools ameliorate the negative effect of disabilities on achievement. Accordingly, English learners and disabled students of a Hispanic descent can benefit from being in smaller schools. These results are in agreement with previous studies suggesting positive effects of class reduction policies on student performance, particularly for minority students (Finn & Achilles 1999; Molnar et al, 1999; Nye, Hedges, & Konstantopoulos, 1999). On the opposite side, school size proved to ameliorate the effect of poverty on achievement in third grade (2008-2009) and fourth grade (2009-2010). Achievement gaps between disadvantaged and affluent students get smaller in larger schools. Figure 4.4 illustrated this interaction. While more affluent students obtain higher scores in smaller schools, disadvantaged students tend to perform better in larger schools. This is an interesting and counterintuitive finding. A possible explanation is that disadvantaged students derive greater benefits from a more comprehensive curriculum and educational resources possible in bigger schools while well-to-do students boost their achievement in schools offering a more personalized attention. Yet, these are only hypotheses and are not intended to provide a conclusive explanation to this relation.

The effect of background characteristics on achievement also varied with the ethnic composition of schools. Various trends are identified. First, schools with higher proportions of Hispanics reduce the gap between disabled and non-disabled students (fifth grade during 2008-09 and third grade in the rest of the years). Figure 4.8 is representative of this pattern for all years analyzed. It shows that non-disabled students experience bigger variations in achievement in schools with different proportions of Hispanics while disabled students tend to perform similarly

in segregated and more diverse schools. In other words, Hispanic non-disabled students seem to be more affected by segregation than their disabled peers. Indeed, gap between both groups seem to be reduced in predominant Hispanic schools because non-disabled students perform poorer and thus closer to disabled students.

Also, segregation reinforced the effect of English proficiency on achievement although only in two instances: third grade in 2009-10 and fourth grade in 2008-09. Yet, according to the literature on language policy segregation was expected to reinforce the gaps between ELL and non-ELL students more frequently. Because English learners benefit from interacting with native speakers, and given the high incidence of English learners among Hispanics, highly segregated schools were expected to strengthen the effect of lack of English proficiency. Yet, it is also possible that schools serving a high population of Hispanics invest more in English language programs and thus avoid widening gaps between the ELL and non-ELL population. A direct implication is that, although segregation affects the average achievement of Hispanics as a group, it does not put an extra burden on those who are not proficient in English.

Table 5.5 Reading and math achievement of Hispanics, academic year 2009-2010

Fixed effects, Variance Components and Model Fit						
Explanatory variables	Reading 3 grade Coeff. (SE)	Math 3 grade Coeff. (SE)	Reading 4 grade Coeff. (SE)	Math 4 grade Coeff. (SE)	Reading 5 grade Coeff. (SE)	Math 5 grade Coeff. (SE)
Mean achievement						
Intercept, γ_{00}	1370.93 (9.38)***	1360.46 (9.89)***	1437.97 (12.96)***	1494.22(13.62)***	1353.52 (13.70)***	1497.19 (18.71)***
School size, γ_{01}	-0.04 (0.03)	-0.05 (0.04)	-0.12 (0.06)*	-0.08 (0.06)	0.05 (0.07)	-0.07 (0.08)
Segregation, γ_{02}	-1.32 (0.35)***	-0.75 (0.35)*	-1.58 (0.47)**	-1.08 (0.51)*	-1.60 (0.44)***	-1.75 (0.52)**
IEP slope						
Intercept, γ_{10}	-144.14(11.10)***	-132.23 (18.46)***	-196.56(20.41)***	-118.34 (20.85)***	-190.81 (17.45)***	-163.50 (16.84)***
School size, γ_{11}	-0.02 (0.03)	-0.06 (0.05)	0.02 (0.05)	0.06 (0.06)	0.06 (0.06)	-0.10 (0.07)
Segregation, γ_{12}	0.65 (0.29)*	-0.21 (0.48)	0.30 (0.65)	0.03 (0.62)	-1.15 (0.56)	0.18 (0.58)
ELL slope						
Intercept, γ_{20}	-99.59(10.87)***	-82.86 (13.25)***	-163.94 (18.82)***	-139.52 (17.14)***	-203.07 (22.57)***	-163.46 (19.42)***
School size, γ_{21}	-0.08 (0.02)**	-0.002 (0.04)	-0.08 (0.04)*	-0.04 (0.06)	-0.18 (0.07)**	-0.12 (0.06)*
Segregation, γ_{22}	-0.18 (0.27)	-1.04 (0.35)**	0.14 (0.53)	-0.06 (0.44)	0.33 (0.57)	0.12 (0.54)
Poverty slope						
Intercept, γ_{30}	-38.05(11.45)**	-29.63 (10.74)**	-80.33 (14.40)***	-56.14 (12.75)***	-47.42 (18.82)**	-56.07 (15.44)**
School size, γ_{31}	0.08 (0.03)**	0.09 (0.05)*	0.11 (0.06)*	0.06 (0.05)	0.01 (0.06)	0.06 (0.06)
Segregation, γ_{31}	0.91 (0.36)**	1.16 (0.36)**	0.82 (0.52)	0.40 (0.48)	0.89 (0.47)	1.26 (0.50)*
Mobility slope						
Intercept, γ_{40}	-72.49(10.09)***	-79.93 (17.81)***	-95.79 (21.59)***	-96.50 (21.88)***	-66.60 (16.65)***	-118.41 (15.18)***
School size, γ_{41}	0.04 (0.03)	-0.04 (0.05)	0.009 (0.06)	-0.01 (0.04)	-0.01 (0.05)	-0.03 (0.05)
Segregation, γ_{42}	0.50 (0.40)	0.17 (0.46)	-0.47 (0.59)	0.29 (0.66)	0.32 (0.39)	0.52 (0.52)

Table 5.5 Reading and math achievement of Hispanics, academic year 2009-2010 (Continued)

Variance components						
Var. in school intercepts	1435.84**	1780.16	3880.96**	5530.44***	3132.43	10342.77***
Var. in IEP slopes	83.44	1239.84*	1553.93	3025.81*	3254.22**	4212.32***
Var. in ELL slopes	124.19	573.19	1109.58	2541.85**	2840.82*	2008.68**
Var. in poverty slopes	407.78	717.16	2021.26	972.03	1591.24	2297.96
Var. in mobility slopes	365.17	1098.94*	903.57	493.12	897.09	3150.10
Var. within schools	13348.44	19976.29	30636.94	29043.76	29977.33	31671.54
Deviance (FIML)	25095.60	26325.02	27192.86	26962.42	27165.60	27073.70
AIC	25157.6	26387.02	27254.86	27024.42	27227.6	27135.7

Note. * p <.05 ** p <.01*** p <.001 All coefficients and standard errors of fixed effects, and variance components are calculated based on restricted maximum likelihood estimation. Numbers in parentheses are standard deviations

Table 5.6 Reading and math achievement of Hispanics, academic year 2010-2011

Fixed effects, Variance Components and Model Fit						
Explanatory variables	Reading 3 Grade Coeff. (SE)	Math 3 grade Coeff. (SE)	Reading 4 Grade Coeff. (SE)	Math 4 grade Coeff. (SE)	Reading 5 grade Coeff. (SE)	Math 5 grade Coeff. (SE)
Mean achievement						
Intercept, γ_{00}	1371.41 (7.63)***	1385.23 (11.61)***	1414.94 (12.87)***	1494.52 (16.15)***	1395.29 (12.14)***	1508.13 (16.37)***
School size, γ_{01}	0.00 (0.04)	-0.02 (0.05)	-0.06 (0.06)	0.02 (0.06)	-0.09 (0.05)	-0.06 (0.06)
Segregation, γ_{02}	-0.92 (0.27)***	-0.55 (0.33)	-1.88 (0.42)***	-2.18 (0.53)*	-2.33 (0.46)***	-1.19 (0.53)*
IEP slope						
Intercept, γ_{10}	-137.94 (13.23)***	-156.10 (15.22)***	-160.97 (12.99)***	-135.85 (18.30)***	-187.28 (27.51)***	-118.80 (24.71)***
School size, γ_{11}	-0.07 (0.04)	0.02 (0.05)	0.07 (0.04)	0.15 (0.05)	0.01 (0.05)	-0.02 (0.05)
Segregation, γ_{12}	0.95 (0.42)**	1.35 (0.50)**	0.27 (0.37)	0.03 (0.47)	-0.11 (0.77)	0.12 (0.66)
ELL slope						
Intercept, γ_{20}	-123.91 (15.02)***	-126.92 (18.66)***	-161.86 (18.48)***	-124.31 (15.42)***	-232.04 (22.92)***	-166.12 (23.00)***
School size, γ_{21}	-0.13 (0.03)***	-0.10 (0.04)*	-0.10 (0.04)*	-0.02 (0.03)	-0.14 (0.05)**	-0.02 (0.06)
Segregation, γ_{22}	-0.12 (0.40)	-0.15 (0.46)	-0.58 (0.43)	-0.55 (0.39)	0.92 (0.63)	0. 57 (0.59)
Poverty slope						
Intercept, γ_{30}	-35.68 (7.99)***	-34.68 (10.74)**	-58.32 (13.02)***	-40.80 (17.15)***	-41.54 (15.26)**	-48.23 (13.02)**
School size, γ_{31}	0.04 (0.03)	0.07 (0.04)	0.03 (0.05)	-0.11 (0.06)	0.10 (0.07)	0.09 (0.05)
Segregation, γ_{32}	0.35 (0.26)	0.17 (0.32)	1.34 (0.44)**	1.43 (0.58)	1.38 (0.49)**	0.54 (0.44)
Mobility slope						
Intercept, γ_{40}	-46.73 (21.28)*	-102.06 (23.72)***	-67.40 (29.29)**	-93.94 (16.84)***	-45.25 (35.63)	-40.14 (31.03)
School size, γ_{41}	0.09 (0.05)	0.06 (0.06)	0.01 (0.08)	0.05 (0.05)	0.06 (0.07)	0.04 (0.06)
Segregation, γ_{42}	0.02 (0.57)	0.09 (0.64)	-0.33 (0.78)	0.15 (0.46)	-0.95 (1.00)	-1.18 (0.78)

Table 5.6 Reading and math achievement of Hispanics, academic year 2010-2011(Continued)

Variance components						
Var. in school intercepts	640.11	2370.58	1920.93*	4909.05*	3101.48	9078.52**
Var. in IEP slopes	1308.82*	2109.24*	145.20	1634.53	666.03	531.02
Var. in ELL slopes	690.54**	1387.97*	856.59	594.48	1801.95*	2469.96**
Var. in poverty slopes	379.08	382.67	366.96	3747.29	1593.27	265.53
Var. in mobility slopes	1241.47	1511.13	5168.95**	87.60	5561.86***	1141.95*
Var. within schools	13868.08	22271.61	27615.76	27486.70	30939.46	31325.35
Number of parameters	31	31	31	31	31	31
Deviance (FIML)	24221.04	25517.97	25492.47	26004.91	25789.61	26127.47
AIC	24283.04	25589.97	25554.47	26066.91	25851.61	26189.47

Note. * p <.05 ** p <.01*** p <.001 All coefficients and standard errors of fixed effects, and variance components are calculated based on restricted maximum likelihood estimation. Numbers in parentheses are standard deviations

The last interaction effect identified includes segregation and poverty. Segregation weakens the relationship between segregation and poverty and consequently reduces achievement differences between poor and well-to-do Hispanic students in third grade (2009-10); fourth grade (2010-11), and fifth grade (all three years). Reductions in the gaps between these two types of students are due to the fact that well-to-do students score lower in highly segregated schools, as can be observed in Figure 6. In agreement with what previous studies showing an influence of ethnic segregation on academic achievement independent of student socioeconomic background (Portes & Hao, 2004; Rosigno, 1998). Thus, well-off students perform lower in segregated schools because they are negatively affected by the overall socioeconomic status of their peers. Although disadvantaged students also experience a detrimental effect on their performance due to ethnic segregation, the magnitude of this effect seems to be smaller than for their non-disadvantaged peers.

The last component of Tables 5.4 to 5.6 reports the remaining variance in the school mean achievement and coefficient slopes for all models conducted. There was still a significant variation in the school mean achievement after adjusting for background characteristics and school attributes in four out of the six models conducted for the academic year 2009-2010 and only in two of the models conducted for the academic year 2010-2011. When considering the academic year 2009-2012, significant variation remained in the relationship between IEP and achievement (four instances), in the relationship between ELL and achievement (three instances), and the relationship between mobility and achievement (one instance). For the last year examined, there was significant variation between IEP and achievement only for third grade, after controlling for other level-1 predictors. The relationship between ELL and achievement still showed significant variance in the models conducted for third and fifth grade.

Variation between mobility and achievement remained significant in fourth and fifth grade while the relationship between poverty and achievement showed no significant variance in any of the six models analyzed.

5.5 SUMMARY AND POLICY IMPLICATIONS

Findings from these analyses underscore that student background characteristics have significant and sizeable impacts on individual standardized test performance among Hispanic students. In all cases, these impacts are larger than the effects of school attributes on student achievement. Although this paper concerns only Hispanic students, these findings are congruent with the broader research on school effectiveness which proposes that schools have relatively little impact on student achievement compared to the socioeconomic background of the students who attend them (Coleman, et al 1996; Rumberger & Tran, 2008). This is not to suggest that schools have nothing to do to enhance education of disadvantaged students, as it is often the case of Hispanic children. Rather, schools can adopt educational programs especially tailored to address the educational needs of Hispanic students. Taking a proactive approach is particularly important in schools and districts experiencing rapid increases of this particular population.

Studies on Hispanic achievement show that Latino students are overwhelmingly low income across the nation. Pennsylvania is not the exception. About 87 percent of Hispanics attending Pennsylvania elementary public schools in the selected districts are eligible for free lunch (from Table 2). Yet, the analyses illustrated that poverty is not the greatest determinant of achievement. When compared to learning disabilities, language proficiency, and mobility, poverty has the smallest effect on achievement in terms of points taken out from the predicted

student average achievement. Reductions in achievement associated with being classified as disabled or not proficient in English range from 130 to 233 points; decreases in performance derived from being poor range from 35 to 80 points. Even mobility has a greater impact on achievement than poverty, a 38 to 102 point-reduction. Schools can do little to change the socioeconomic status of a disadvantaged child -at least in the short term. However, they can invest in designing effective interventions to better address the needs of IEP, ELL, and geographically mobile students. This is particularly relevant for disabled and ELL Hispanics as the negative effects associated with these conditions increase as students advance to higher grades. Since schools are likely to face greater challenges in enhancing achievement of this group in higher grades, early interventions are pertinent. Indeed, previous studies have suggested the importance of investing in teachers and educational resources to provide effective schooling to language minority students (Garcia, 1988, 1991; Calderon, 2011). Interventions in this regard are urgent given that 27 percent of Hispanic students attending Pennsylvania elementary schools are classified as ELL and approximately 15 percent have a learning disability (Table 2).

Among the Hispanics examined, about 10 percent are mobile students who did not complete a full-academic year at the school where they were tested. Pennsylvania has a Migrant Education Program which provides supplemental educational and support services to migratory students and indicates the importance of this group. This program is described in the next chapter. Of particular importance is to assist school districts in coordinating programs so schools can provide continuity in schooling even when students move around schools. Additionally, targeting districts that are more likely to experience mobility among their students and strengthening efforts there is crucial.

With regard to the school context, this analysis confirmed what was expected. Racial segregation does matter. When considering all Hispanics together, diverse schools showed significantly higher school performance than did segregated schools irrespective of grade, year or subject. Segregation is not just sitting next to someone of your same race. Economic class, family, and educational background are all intertwined with race. Segregated minority schools are fundamentally different from segregated White schools in terms of the background of the children and other factors that are critically important for educational opportunity (Donato, Menchaca, & Valencia, 2001). Many studies document an extremely high correlation between Hispanic enrollment and the percentage of students who receive free lunch, a trend also observed in this research (Lopez, 2009; Orfield et al., 1997; Donato et al, 2001)). These studies also show consistent evidence that high poverty schools usually have much lower levels of educational performance on virtually all outcomes.

But this is not all caused by the school; family background is a more powerful influence. Schools with high concentrations of low income students have less prepared children, which in turn affects all students attending that school whether or not they live in poverty. Well-to-do or well-prepared children can be harmed academically if they attend school with a majority of disadvantaged students. Conversely, disadvantaged students benefit academically from having well-off peers or attending school with well-prepared students. Hence, promoting schools that are ethnically diverse is a desirable goal to enhance performance among minority students. In 1954, the Supreme Court recognized the importance of diversity within schools and concluded that intentionally segregated schools were inherently unequal. The Hispanic population in Pennsylvania is concentrated in few districts. In those districts, the Hispanic student population is also increasing rapidly. For these districts it is of paramount importance to constantly monitor

the ethnic composition of their schools so that equal educational opportunity is realized. Also, encouraging smaller enrollment at schools with a high percentage of ELL or IEP students could improve educational outcomes among Hispanics. Both English learners and disabled children require more individualized attention and schools are more likely to offer it when there are fewer students. Another policy to improve the educational achievement of these students is to invest more in special education teachers and language instructors.

All together, this chapter characterizes the effect of major school and student attributes on achievement of Hispanic students in Pennsylvania public schools. In doing that, it identifies some student characteristics that demand urgent attention. The next chapter builds in these findings by pointing to additional factors influencing achievement and further exploring those already analyzed here. Also, it analyzes major challenges that schools encounter when serving Hispanics and characterizes successful strategies to improve student performance.

6.0 IMPLEMENTATION OF EDUCATION PROGRAMS FOR HISPANICS: THE CASE OF READING, PENNSYLVANIA

The previous chapter illustrated that a student's background in an important determinant of achievement. In particular, the effects of ELL, IEP, poverty, and mobility on achievement override those of school attributes. Even though Hispanic students are likely to enter school with various shortcomings, schools can implement strategies to address their needs the best possible. This chapter examines the implementation of education programs in Reading School District. Its main purpose is to systematically identify major challenges that schools encounter when serving Hispanic students as well as to characterize successful strategies. In addition, this chapter seeks to complement findings from the multilevel analysis by identifying other factors that influence achievement of minority students. In order to achieve these goals, six major themes are discussed throughout this chapter: Hispanic family profiles; school operation; language, education, and achievement; educational and non-educational challenges; effective school strategies; and social integration. Data used in this chapter comes from semi-structured interviews and field notes of classroom observations.

The next section describes each of the five major themes examined in the interviews. Then, the schools and families studied are characterized. The rest of the chapter analyzes all schools along each theme.

6.1 INTERVIEW THEMES

Five major themes were explored in the interviews and reported during the field observation: family and school background information, education of Hispanic students; language and education; home-school communication, and community integration. The first theme, background information, provides a general picture of the educational resources that schools have and characterizes the families interviewed. Specifically, school principals, teachers, counselors, assistants and parent outreach were asked about their professional experience and academic degrees. According to studies on effective schools highly-skilled teachers and well-trained staff are basic inputs to teach minority students (Carter & Chatfield, 1986; Calderon, 2011). Questions asked to parents include country or origin, time living in the U.S., number of children, level of education, and who they live with. These questions were included to contextualize the family environment where Hispanic students are raised. The Theory of Segmented Assimilation suggests that parents' human capital and families that stay together positively impact educational achievement among immigrant students (Portes and Hao, 2004). Second, questions on education of Hispanics investigate the major educational needs of this group, the main challenges faced by schools, as well as the most successful strategies schools implement. A particular emphasis is put on assessment and monitoring of students. Schools that provide effective schooling to minority and/or immigrant students monitor progress, provide immediate feedback and use data to improve achievement and instruction (Garcia, 1988; Williams et al 2007).

A third theme explores the relationship between language use and educational achievement. Here schools were asked whether they use some type of English language instruction for non native English speakers and, if so, how they implement these programs.

Empirical evidence shows that providing some type of language instruction to English learners leads to higher achievement than using English-only education (Cummins, 2000; Ramirez et al, 1991; Hakuta, 1997). Because language education programs can be poorly delivered English language classes were observed in all four schools visited. In addition, parents' perceptions about the importance of speaking English and Spanish were also collected. Empirical studies have shown a positive association between fluent bilingualism and school performance of first and second generation immigrant children (Portes & Rivas, 2011).

Home-school communication is the fourth theme examined. On the one side, teachers and school Principals were asked about involvement of Hispanic families in school as well as specific strategies to increase levels of participation. On the other side, Hispanic families were asked how often they attend school meetings, how comfortable they feel communicating with teachers and what recommendations they have to improve the services provided by schools. A strong home-school communication and high parental involvement has been shown to positively contribute to higher performance among minority students (Carter & Chartfield, 1998; Calderon, 2011). The last theme is community integration and examines incorporation of Hispanic families into the broader community. It investigates how Hispanic families are received in the broader community, what are their main social networks, and whether they get along with other Hispanics and ethnic groups. The Theory of Segmented Assimilation suggests that favorable reception by government authorities, a sympathetic or at least not hostile reception by the native population, and the existence of social networks with co-ethnics pave the way to use whatever credentials brought by immigrants from abroad (Portes & Rivas, 2011). Because children are raised within specific families, how well they perform at school is associated with the successful incorporation of their families into the host community.

6.2 SETTTING DESCRIPTION

The four schools studied are located in the Reading School District, which is in the Eastern part of Pennsylvania. During the cycle 2010-11, the Hispanic student population in this district represented 77% of the total enrollment. Hispanics in the city of Reading account for 58.2% of the total population. Among the residents of this city, about one-fifth is foreign-born suggesting patterns of recent and old migration. In other words, not all Hispanics living in Reading were born in Latin-America but rather some were born in the U.S. Also, Hispanics in Reading are young with one-third of them being under the age of 18, which explains the high Hispanic enrollmentpercentage. Use of Spanish is common and widespread in Reading; almost half of the households (48%) speak a language other than English. When looking at language use in schools, about 20% of the overall K-12 student population is classified as English learners.

Reading's population is highly impoverished. Thirty-five percent of its habitants lives in poverty which contrasts with the 12.4% of Pennsylvania's population that do so. Poverty is also reflected in the composition of the student body. Reading School district is considered a Title I district, which indicates that every single school in the district has a high percentage of students who receive free or reduced breakfast and lunch. The high percentage of Hispanics, the generalized level of poverty and the high incidence of ELLs students make the schools in this district relatively homogenous and thus particularly suitable for comparative analysis with regards to performance. Reading has 14 elementary schools from which 4 were selected for study. Table 6.1 summarizes the main characteristics of these schools. School names are omitted for confidentiality and numbers are assigned instead.

With the exception of performance level, all four schools have similar proportions of Hispanics, English learners, and economically disadvantaged students. Schools slightly differ with regards

to their size. The original selection of schools tried to include schools with similar total enrolment. Yet, two schools were not able to participate and two new ones were added. Among the schools selected, School 2 is relatively smaller. A larger high-achieving school was chosen but declined to participate. Schools' overall performance level, measured as adequate yearly progress (AYP), is reported in the second column[20]. AYP determines how every school and school district is performing academically according to results on standardized tests. Although a different indicator of achievement from that used in the previous chapter, AYP is ultimately based on results from standardized tests. To assess a school AYP, all students enrolled are considered, irrespective of race. The last two columns in table 5.2 indicate achievement among Hispanic students. It shows the proportion of these students who scored below basic in math and reading according to the Pennsylvania Systems of School Achievement test (PSSA).

Schools 1 and 2 have met AYP for the last years and also display fewer Hispanic students performing below basic in math and reading. School 3 is under improvement plan because it has not met AYP although it has similar percentages of Hispanics performing below basic than School 2. School 4 is currently implementing a corrective action plan since AYP has not been met during several years; it also has the largest proportion of underperforming Hispanics among all four schools.

[20] Adequate Yearly Progress is a measurement defined by No Child Left Behind. Section 1111 (b)(F) determines that "each state shall establish a timeline for adequate yearly progress. The timeline shall ensure that not later than 12 years after the 2001-2002 school year, all students in each group described in subparagraph (C)(v) will meet or exceed the State's standards". These timelines are developed by state education agencies working under guidance from the federal government.

Table 6.1 Demographic and performance data for the 2010-2011 year. Selected schools

School	Performance level	Total students	% Hisp	% ELL	% students receiving free lunch	% Hisp scored below basic Reading	% Hisp scored below basic Math
School 1	High – met AYP	736	81	25	95	12	7
School 2	High – met AYP	372	85	17	95	30	15
School 3	Medium – improvement plan	565	85	27	99	30	10
School 4	Low- corrective action	775	78	19	97	42	20

To the extent possible, schools were selected trying to minimize differences among the students they serve while seeking to obtain maximum variation in their overall performance. A caveat needs to be provided with regards to School 3 and School 4. The Reading district appointed new Principals in these schools during the year 2010-2011 with the explicit purpose to improve achievement levels. For these schools additional questions were asked to identify major differences between the current and previous principals. In particular, principals were asked about specific changes they have implemented to improve achievement and teachers were also asked about the main differences they have observed between the new and old administration.

6.3 FAMILY PROFILES

According to school authorities and teachers, most of the Hispanic families served in the Reading school district come from three major destinations listed in order of magnitude: Puerto Rico, the Dominican Republic, and Mexico. A smaller proportion of students come from Central

and South America. This information was not confirmed with actual data since the U.S. census does collect information by country of origin for all cities and schools do not make this information available to the public. Yet, there was wide consensus about this trend and interviews with parents confirmed it. Forty-five percent of the parents interviewed are originally from Puerto Rico, 27 percent are from the Dominican Republic, 18 percent are Mexican, and 9 percent are from Central America. In all cases the parents interviewed were women. When asked for the reasons to migrate to this specific city, answers revealed patterns of recent and old migration. Those parents who declared to live in the U.S. longer than twenty years were brought at an early age by their parents. Half of them migrated directly to Reading while the other half lived in a major destination first (New York and Los Angeles). Most of the families interviewed have extended family in Reading. Indeed, the existence of kin networks was the main reason to migrate to this specific city in some cases. A mother said she moved to Reading from Mexico because her brothers came first and then encouraged her to join them later. Local churches also play a role in migration. Two families from the Dominican Republic mentioned to have a close relationship with members of a local Christian church and thus decided to come to Reading to collaborate with the religious group. Among the mothers interviewed, most of them have 2 or 3 children. Twenty-seven percent of the mothers interviewed said they lived with their husband or partner. The rest declared to live just with their offspring.

6.4 LEADERSHIP STYLES

Principals in School 1, 2 and 4 have a Bachelor degree in Elementary Education. Principals in the two high performing schools also have a Masters on Educational leadership while principal

in School 4 holds a Masters in Urban Education. They all have been teachers prior to becoming principals. Principal at School 3 has a Bachelor degree in Sociology and a Masters in Education with an emphasis in counseling. He has experience as school counselor and as a Principal in middle and high school. In all cases, principals have a minimum of five years of experience in this position.

6.4.1 School 1. Monitoring, strong communication, and teamwork

The Principal in this school shows great leadership skills by stating clear goals, organizing and leading specific activities and strategies, and involving everyone in the school in accomplishing goals. School 1 really stands out because of the constant monitoring of students and the intensive use of data to design individualized interventions. In addition to the PSSA, this school uses two additional tests to monitor students' progress which is tested at least once a month. One test, the Dibels, is used to determine language needs among English learners. The second test, called Four Sights, is used to predict the students' performance in the PSSA. Teachers use this test to provide additional support in those areas where students are weak. This school has implemented a very-functional monitoring system where each student has a progress memory book which states a target line. Accountability is all around the building. Each classroom has data reports posted on the walls and individual students graph their own data. The Principal purposely seeks to involve students in monitoring their progress so they know their goals, their gains, and what they need to keep working on. "They get very excited looking at their gains."

In this school, accountability has the ultimate purpose of informing instructional decisions. All data are analyzed several times by different staff members. Classroom teachers, language teachers, reading coaches and the Principal all meet to discuss the data and decide

interventions according to each student's individual needs. This requires strong communication and a great deal of collaboration. Teachers have same-grade meetings very often and constantly communicate with instructional coaches and language teachers about the progress of their students. During the visit to this school it was common to observe teachers having small informal and formal meetings to inform each other about student's progress. Teamwork and peer collaborations are the major pillars in this school. The Principal makes sure that everyone in the building works towards the same goals and feels rewarded. Although only third, fourth, and fifth grade students get tested, the Principal recognizes that the effort includes all teachers. "It's not that third-graders all of a sudden have this knowledge. Upper grade teachers realize the work done by K to 2 teachers. It's a school effort". Principal in School 1 works hard to make sure that every person in the building feels part of a successful team. As one of the teachers declared, "We have been number one in the district for various years in a row. Last year we came in second but still it's a lot of work. We have a great Principal; she really cares about the kids and does an excellent job leading all the interventions."

6.4.2 School 2. Discipline, language development, and education for parents

School 2 is the smallest one among the four buildings visited. It serves a very stable population of students and has the fewest ELL students. Similarly to School 1, this school met average yearly progress and is considered one the high performing elementary schools in Reading. Order and discipline define this school's environment. The classrooms and corridors were completely silent during all the visiting. Rules permeate almost every aspect of students' life. Students use bathroom passes that control the number of students who may congregate in the restroom at the same time, a maximum of three. During lunch time students occupy seats previously assigned by

teachers to control behavior issues. Everything appeared to be disposed to instill good conduct and adherence to rules. Indeed, students at School 2 appear to be the quietest and best behaved among all four schools visited. This emphasis in discipline was more evident when interviewing the School counselor, who serves as de facto Vice Principal:

> I make sure everything in the school is in order, that students wear the uniform. Sometimes parents don't like it but that's not optional. Wherever you go you have to follow rules. A student may not be really good at academics but he needs to behave. That's very important.

This school also emphasizes developing English proficiency among their ELL students as soon as possible by using very structured strategies such as clapping and choral response. Teachers in different grades were observed using these strategies uniformly. The principal explained some of these strategies.

> One of the school rules is everyone speaks in complete sentences. There's a lot of coral response where the teacher reads and the students echo. We have a lot of response cards that students use if they have limited proficiency. We check for understanding, if you understand everything is a three, something a two, and one if you're completely lost. We do thumbs up and thumbs down to get student reactions to a theme.

Lastly, School 2 puts a great deal of effort on building on the home-school partnership and trying to educate parents on the value of education. "We try to instill the importance of education, attendance, reading at home, doing homework and things like that… just creating that home-school partnership… that children's education is a shared responsibility would be huge."

This school organizes many activities to bring parent in to school and then share with them strategies to help their children at home. As the Principal stated, “we throw out all the incentives, free dance Friday for the students, prizes and raffles, foods, and whatever is going to pull people in.”

6.4.3 School 3. Love, discipline, and school as a social agency

School 3 had a new Principal appointed in 2010. He himself is from Reading, received his education there, and developed as a professional in the area. When referring to the main challenges his school encounters he showed a comprehensive view of students' struggles and expressed a strong commitment to help them. His approach was not limited to addressing the academic needs their students have, but also extended to tackling poverty in the community and all the situations that derive from it. Poor expectations for education, behavior problems, mental needs, absence of role models, and violence were all seen as deriving from poverty by this Principal. He firmly believes that all these situations affect how students feel and what they can accomplish at school. Consequently, the Principal in School 3 started his administration with a couple of major changes. First, he addresses discipline issues by making evident he cares about students: he extensively talks to them when they misbehave and makes sure to enforce rules and assign consequences if someone breaks them. He mentioned a student with serious behavior problems derived from hyperactivity; he referred him to a health agency and now the student is doing well. “I check on him. I chat with him. I give him hugs and love because I want the kid to be successful”. A staff member also pointed to the change in leadership style: “It’s a big change from the previous principal. Now we don’t have kids misbehaving as we used to. Because he gives them love but also teaches them rules and enforces them.”

Another change implemented by this Principal is an open-door policy for parents. “He’s always here and if you want to talk to him he’ll talk to you right away. The previous Principal didn’t like parents in the school and left me alone to deal with them”, the parent outreach coordinator mentioned. For the Principal in School 3, approachability goes in tandem with the willingness to help parents solve their basic needs. “You need to understand the conditions in which these kids live. These families have real issues and if they come to me asking for help, I’ll do whatever is in my hands to help them”. Thus, School 3 resembles a social agency by assisting families to get access to different types of social assistance from government, including housing, shelter for homeless families, counseling services for children and parents, and even assistance in finding job. When the researcher suggested that this goes well beyond the educational role of the school, the Principal commented:

> Yeah. But you do what you have to do. And if we are gonna make the school successful we need to pool our resources as a community… We have some issues and it’s tough for kids, for kids of color, for minority kids period. So, when I have kids I want you to invest in them. I’ll do it. I’m like father Ibrahim.

6.4.4 School 4. Re-assessment of needs, leadership, and communication

Similar to School 3, School 4 had a new Principal starting in 2010. As part of the improvement plan, this Principal has implemented a couple of strategies to re-assess the educational needs of the school: making the best use of existing resources, creating a collaborative environment, and setting high expectations. Similar to School 1, School 3 now has an emphasis on analyzing different pieces of data to identify where the gaps in the learning process may be occurring. Teachers are then asked to examine the data and develop lessons and ideas to improve

performance. In order to improve instruction, Principal in School 4 organized teams of teachers to do classroom observation. Each team was asked to make five-minute visits to different classrooms, observe the class, and write three outstanding things about the teacher observed and three things that he would like to ask. The Principal strategically organized all teams so teachers would observe classrooms in a different grade from what they teach. The ultimate goal is to provide teachers with a comprehensive view of the school needs and resources and allow them to learn from each other.

> They're really seeing what's going on younger and older, and may be picking some of the strategies from those teachers and make them their own. We're trying to get to look at the whole picture […] So, yeah, looking at what we have in the building instead of looking outside. We have so many wonderful teachers in this building to look at and dissect.

When asked about changes implemented by the new administration, school staff mentioned the new Principal has brought more organization, collaboration, teamwork and better communication. "Ever since she came in here it's been leadership. Things are much more organized this year. We get more assemblies. There's a better sense of community". This sense of community also included the parents, which School 3 was working hard to make them feel comfortable approaching the school. Among all the schools visited, this was the one where the parent-teacher association meetings were actually taking place. The school seemed very committed to step out in communication with parents while providing all the resources they have available for that. Specifically, the school purchased headphones for Spanish-speaking parents to use during the meetings. Although the information given in the meetings is stated in English,

there is a person who translates everything in Spanish for parents. “They can still come to our meetings and understand what is happening and build that relationship.”

6.5 LANGUAGE, EDUCATION, AND ACHIEVEMENT

Students in Pennsylvania are classified as English learners (ELL) based on an English proficiency test designed by the World-Class Instructional Design and Assessment Consortium (WIDA). This test, commonly known as the WIDA, is given to any student who enrolls in the district and whose transcripts indicate English is his second language. This test measures student’s English ability in reading, writing, listening, and speaking. Proficiency in each component is scored from 0 to 6, where 6 means full proficiency. Once a student is classified as English learner he enters the English language acquisition (ELA) program and receives language support until he is considered proficient. There are three the criteria to exit the ELA program in Pennsylvania: an overall score of 5.0 or higher in the WIDA test; a score of basic or higher in the PSSA test; and a passing grade in all four content areas: math, social studies, science, and English.

Reading school district puts a special emphasis on its ELL students by constantly innovating in their programs and investing in their resources. Since 2004, the district adopted an inclusion policy to teach ELL students. They are no longer separated in special classrooms (self-contained) but rather taught with other regular, special education, gifted, and newcomer students (mainstreamed). Also, since 2007 many teachers in Reading have become certified in English as a Second Language (ESL) thanks to a grant of the U.S. Department of Education. This grant was awarded to Penn State Berks County to implement project ISLAS, a program which seeks to

increase the number of qualified staff and ESL educators in disadvantaged areas. In 2010, the Reading district adopted a new English program for elementary education. The goals, materials, and guidelines of this program are the same for all elementary schools but implementation may vary depending on the needs and resources each school has.

Generally speaking, ELL students are instructed by two teachers: a classroom teacher who teaches all content areas; and an English Language Acquisition (ELA) teacher, who addresses English language needs. Classroom teachers provide instruction to all students who are in a specific classroom and may or may not have a certification to teach English. When classroom teachers are also certified to teach English, they may implement some strategies to better serve ELL students. However, they are not responsible for teaching English language to ELL students. This is the primary task of ELA teachers. These teachers have to be certified in English as a Second Language and serve ELL students in all grades. Knowledge of Spanish is not a requisite to become an ELA teacher. However, some of the ELA teachers interviewed also speak Spanish.

ELL students receive one to three forty-five minute periods of English instruction a day, depending on their needs. For instance, newcomer students, those who have been in the United States for less than a year, receive three periods a day and are usually assigned to classroom teachers who are also ELA. ELA teachers used a combination of pull-out and push-in techniques to teach English. In the first case, ELLs are pulled-out from their regular classroom by an ELA teacher and then taken to a different space used for English instruction. In the second case, ELA teachers push-in regular classrooms to provide English instruction to a small group of ELLs. Pull-out is commonly used when students require more individualized attention, such as language development and writing, while push-in is used to reinforce instruction in the main

classroom. The only exception to this strategy was School 4, where students were always pull-out for reading, writing, and language development.

The four schools visited have similar ELA resources but differ in the number of ELLs served, which affect the ELL student-ELA teacher ratio (see Table 5.2). The two high achieving schools illustrate the two extremes of the spectrum. School 1 has the largest ELL population, two ELA teachers, and an ELL-student/ELA-teacher ratio of 90. With the same number of ELA teachers, School 2 serves 63 ELLs and has an ELL-student/ELA-teacher ratio of 31[21]. Despite this difference, being able to address the language needs of ELLs was a common concern expressed in all four schools. Indeed, all ELA teachers emphasized the importance of providing more individualized attention to ELL students. Given the shortage in language resources, some schools adopt *ad hoc* to serve all students. A classroom teacher, who is also ESL certified, mentioned that she teaches both content and English language to their students: "Because I'm ESL certified and we have so little staff, my students don't get pulled out for additional instruction. I use the techniques I learnt when I'm teaching."

.Table 6.2 Reading School District. ELA staff in selected schools

School	ELL students	ELA teachers	ELL/ELA teacher ratio	ELA classroom	Bilingual aides
School 1	180	2	90	6	4
School 2	63	2	31.5	6	1
School 3	151	2	75.5	5	2
School 4	145	2	72.5	6	3

Note: information provided by the Director of English Language Acquisition. Reading School District

Amongst the schools studied, School 1 also has the most educational resources when it comes to English language. It was the building where more bilingual and bicultural staff was

[21] Usually, one teacher sees students from kindergarten to grade two and other serves third, fourth and fifth grade.

observed. The two ELA teachers are Hispanic and speak Spanish. In addition, some of the ELA classroom teachers also speak Spanish. Needless to say, all bilingual assistants speak Spanish. Although the number of Hispanic teachers and staff working in School 1 is not reflective of the student population, it was the school with more Hispanics in the role of educators. School 2 has only one teacher of Hispanic descent but who does not speak Spanish; School 3 has no Hispanic teachers at all; and School 4 has one. The Principal of School 3 was quite critical of the low representation of minorities among school staff: "I don't have minority people in this school. I mean, in the role of educators. I can't continue to have none of my children reflected in my staff. I just want my kids to say, if she did it, I can do it." Having Hispanic educators in a district that is overwhelmingly Hispanic may certainly provide role models for minority children. Hispanic teachers can also help students to ease the cultural and language transition, particularly among newcomers. A second-generation Puerto Rican teacher mentioned that her Hispanic descent is a great advantage for teaching Hispanic newcomers:

> When they first come, they're afraid and shy. They don't speak at all. But as soon as they find out I speak Spanish, they want to talk to me and start feeling comfortable. I can see how other teachers don't like when students call them missy; they find it disrespectful because in the American culture you call people by their names. But in actually, that is a sign of respect in the Latino culture. You don't call people by their names or look at adults in the eye. I don't mind if they call me missy. (ELA classroom, School 1).

Overall, principals and teachers showed a positive attitude towards Spanish use among their Hispanic students and encourage parents to speak it at home. When parents are not proficient in English, which is often the case, teachers suggest that they reinforce what is taught

at school in Spanish: “I recommend parents to practice reading or math in Spanish. They’re practicing exactly the same skills but only in a different way that an American parent would do”. Also, some teachers mentioned that students who have a good command of Spanish learn English much faster than those whose Spanish is less developed.

When parents were asked about the importance of Spanish, an overwhelming majority expressed a desire for preserving this language in their children. Indeed, some Hispanic mothers would like to see schools offering Spanish classes so their children can learn to write and read in Spanish as well. Being bilingual is highly valued as families see clear benefits to it; getting a better job and being able to serve as an interpreter were the most cited examples. “You have more opportunities speaking two languages, for jobs, for everything”. In fact, most parents speak just Spanish to their kids in order to preserve the language. Only in one case a mother declared to speak English to her daughters so they “learn it well.” Also, parents associate speaking Spanish with preserving their culture and being able to help co-ethnics:

> Their [daughters’] first language is Spanish and they have to practice it and embrace it with proud. I tell them, if you keep your English and your Spanish you can help more people. When you see someone in need you can help because you know two languages”. That’s very important. (Mother, Puerto Rico, School 3).

Bilingualism was also associated to the opportunity to get a job outside specific sectors, particularly agriculture.

> Sometimes I tell my child to do his best at school. That’s what you need so you don’t end up working in the fields… and him, knowing English, even though he doesn’t have documents, he could get a passable job, not in the fields, may be as a clerk in a store.

> Because there are always regular jobs if you know English. So I tell him, learn well how to interpret so when you get a job, you truly know English. (Mother, Mexico, School 1)

In contrast with the open desire to raise bilingual children, half of the parents said they have a poor command of English (i.e. understand some English and speak few words). English Proficiency was more common among Puerto Rican mothers who also came to the U.S. at an early age. Spanish proficiency was moderate (i.e. understand almost everything and speak some) among U.S.-born Hispanic children and moderate to high among immigrant children (i.e. understand all and speak fluently). Only one Mother reported to read in Spanish to their daughters and teaching them to read. In the rest of the cases, speaking Spanish at home was the main and only vehicle to promote Spanish proficiency among children.

6.6 MAIN EDUCATIONAL NEEDS AND CHALLENGES

Principals in all schools coincide widely, irrespective of their schools' performance level, in what they consider the major academic challenges in relation to educating Hispanic students: the language barrier and poor background knowledge. Although only one-fourth of Hispanics in the schools visited are ELLs, teachers and principals equate easily the educational needs of Hispanics with the main necessities of English learners. The answers are reflective of the resources, time, and student-specific interventions devoted by schools to develop English proficiency among their students. Such interventions are not exclusively used with children who recently migrated from their home-countries. Rather, U.S.-born children often times require some type of language instruction as they tend to grow in Spanish-only households. According to

school authorities, students do not need to be formally classified as English learners to receive additional support if they need it.

According to the Director of English Language Acquisition, the biggest challenge when it comes to English learners is the lack of sufficient educational resources to serve them effectively. “They’re seen for 40 minutes or half an hour a day. If the classroom teacher does not know how to differentiate instruction, their language needs are not being met. We don’t have enough teachers to be with them all the time”. She also mentioned that English learners in the Reading district struggle to exit the language program and suspects it may be caused by the lack of sufficient resources.

> A lot of our students were born in the U.S. and come from Spanish-speaking homes and just haven’t been able to pass out of our English language program. So we have a lot of students that are in the program for years because they’re not developing somewhere, I don’t know where yet. We’re still looking to see why it is they cannot pass the test. My concern is that they are not receiving enough direct instruction because we don’t have enough teachers to serve them.

The language barrier also includes parents, who often times do not have a good command of English and are thus unable to support their children at home. As the principal in School 4 declared:

> We have a lot of parents that do not speak the language as well. We do everything we can within the building but what happens at home we have no control over. Are they being able to understand and complete their homework? I don’t know.

Interviews with parents confirm that existence of a language barrier since they declared that English is often times an obstacle to help their offspring with school assignments. A mother from Mexico said: “I think we are several moms that do not speak English. It’d be good if schools can send homework in both languages. In Spanish and English so we can help them more”. One-third of the mothers interviewed had similar comments. These findings reinforce previous results derived from the statistical analysis. Lack of English proficiency is one of the most important factors influencing achievement of Hispanics. Not only does it have the biggest impact on achievement in terms of points taken out of standardized tests, but it is also one the biggest challenges that schools and families face when trying to improve achievement of this group.

Poor background knowledge, defined by teachers as what a child comes with, was the second major academic challenge educators encounter in relation to Hispanics. According to teachers, there are noticeable variations in background knowledge among Hispanics. While some of them have the background they need for their school grade and even more, many others are very lacking in their schooling. When this is the cases, teachers provide students with a lot more support in terms of basic education, such as letters, numbers, and natural sciences.

> With the academics we just try to fill the gaps the best we can. This year I have the two extremes. I have kids that were [academically] three levels above their level [when tested] in Spanish. And I have kids, like this girl, that she doesn’t even know the alphabet in Spanish and she’s in second grade. That’s a child I know we really need to support (ELA teacher, School 3).

> They [Hispanics] lack a lot of background knowledge when it comes to teaching. Even things we just take for granted when they come. Like we talk about different types of plants, or different types of animals. They don't know how a cow looks like or the sound they make. Things we assume kids would know. Or when we talk about stories, fairy tales or Disney staff, they do not know that (ELA teacher, School2).

Interestingly, teachers identified differences in terms of background knowledge between U.S.-born Hispanic students and newcomers coming from abroad. Teachers mentioned that the second group often times show better background knowledge and make more gains in relation to learning English. "Poor background tends to be more in our population that grew up in the States, not in the newcomers. It's also the newcomers who can have the most growth [when learning English]". Similarly, the principal in School 3 mentioned: "For some of my kids, the ones who have always lived here, life is relegated within five blocks. But some of them have a lot of background knowledge because they've been to Puerto Rico or to Mexico". Among Hispanic newcomers, academic gaps were more often observed in students coming from the Dominican Republic and sometimes from Puerto Rico. Yet, this relationship is not deterministic but rather relates to whether a student attended school in a rural area or in a major city before coming to the U.S. Teachers declared that Hispanic newcomers who come from rural settings were more likely to attend crowded schools and have less instructional time that those students coming from bigger cities. Consequently, newcomers from rural areas often times present more academic gaps.

In addition to academic needs, schools identified various challenges related to non-academic issues: geographical mobility, poverty, low parental involvement, and cultural

differences about education were the most important ones. Mobility was particularly challenging for one of the two high-achieving schools, School 1, and also for School 3. Students in these schools constantly interrupt their schooling due to constant changes in their family residence. Transient students in School 1 amount up to 60 percent of the total student body, according to the principal. When transient students are considered, the student body in school 3 triples:

> "It's sad because I only have 565 kids in this building and my in's and out's are about 1500. It's scary. I have a kid, you get to teach him and then suddenly disappears. And then a couple of months later he comes back".

According to principals, geographical mobility is largely triggered by socioeconomic and family-related issues. Housing, employment, or any problems occurred within the family may cause parents to move within the district or get back to their home countries. Although Principals seemed understanding of the families' need to move around, they also acknowledge the detrimental impact of mobility on student's achievement.

> I understand that they need to move, is rent, is housing, and whatever happens within the community, but that mobility is very detrimental for their child, and for the parents too. I mean, they need to establish relationships.

Constant mobility poses additional difficulties to provide effective schooling as students are constantly adjusting to new teachers and schools do not have the time to make an impact on their education. Indeed, given the high incidence of mobility among its student population, the Reading school district has aligned its curriculum and work with the same materials.

> We try to make sure that our curriculum is aligned district wide, the pacing and what is taught pretty much is the same along the district. But no matter how much we do as administrators to make sure everything is the same, there is always something different if they go to different schools. It makes it very difficult to educate kids when they're constantly moving in and out (Principal, School 3).

Mobility also complicates the assessment of students' needs and the design of appropriate interventions. For example, when a student changes schools constantly, a learning disability might be confounded with lack of exposure to curriculum.

> Sometimes is difficult to get a hand on that [learning disabilities] if the child moves before you can do some solid evaluations […] I'm not going to put a referral for a child for special ed until we do some assessing and we gather some data. Is it a learning disability or is it because he hasn't been exposed to the curriculum. There's a big difference there. And then the child moves before you get that process in place. Here we actually put a referral because if we are not reactive no one is going to deal with it (Principal, School 1).

Mobility was identified as a significant determinant of achievement among Hispanic students in the previous chapter. The case studies confirm this finding and identify various triggers of mobility. Also, this chapter shows that mobility affects in different levels schools located within the same district. Mobility was an important hindrance to students' achievement only in School 1 and 3. For the other two schools this was not the case. School 2 mostly serves poor families who live in a nearby housing project, which makes its student population pretty

stable. School 4 did not mention mobility at all. A possible explanation is that rents are cheaper around this school's area so families may have an incentive to stay there.

A second non-academic challenge identified by schools is poverty. Of course, poverty is not exclusive of Hispanics. Yet, empirical research has shown that poverty incidence is higher among specific groups, particularly for Hispanics and Blacks (Ortfield et al, 1997). Students in poverty are at-risk not only because of poverty, but also because all the things that tend to go with it. Employment, housing, day care, transportation, stress, and mental health issues are situations commonly associated with poverty that also affect student performance. As mentioned earlier, poverty affects schooling when families move around to get cheaper rent or because parents lost their jobs. Staff in School 3 was particularly aware of the economic struggle of families and devoted resources to help them. The parent outreach helped parents filling out housing and welfare applications and the principal mentioned to "to pull some strings to be able to help families to find housing in this area". But poverty also influences student achievement at other levels, such as the educational resources that students have at home or impacting school attendance. The Principal of School 3 said: "One of the main needs of these students is not having the resources at home to provide supplemental background. We often find a lot [of students] that don't have sufficient books at home". Parents in the schools visited usually depend on public transportation and cannot afford daycare. It was common for parents to take their children out of school if someone in the family has an appointment. "Because they don't have anyone else to pick their children up at the end of the day, they take them all out of school if anyone has a doctor's an appointment".

Perhaps the clearest impact of poverty on student's lives occurs at the basic needs level. The Principal and teachers at School 3 put a special emphasis on taking care of the educational

challenges derived from living in poverty. Students who live in poverty are less likely to be taken care of at home, they struggle to have their basic needs met, and often times acquire responsibilities unusual for their age. A second grade teacher declared the biggest challenge their students face is just to cope with their home life and come to school ready to learn. According to her, the family environment in which their children grow put a big burden of their learning process:

> Their basic needs are their biggest struggle. They go home and don't get fed, they go hungry. They're getting breakfast and lunch here, and that's still only two meals a day. And breakfast is at eight, lunch is at eleven. And that's it for some of them.
>
> They take care of themselves. And they're so young! And they're taking care of their brothers and sisters. They're up at night. We have students coming to school tired because they had to… they were up with the baby last night and not the parents because they work. I know is stereotypical but they come and tell you. They're not living in the best situation. And we need to address those needs also.
>
> I think that's the biggest challenge, being almost like their moms and their dads, and being comforting and then teaching them. I think it has to go hand in hand and to encourage them. I think some part of the day we need to spend just listening to them.

A third non-academic challenge that schools encounter in relation to Hispanic students is insufficient parental involvement. For all Principals, parental involvement is key to students' success, regardless of their race or ethnic origin: "a parent who is on board, who is always in the

school, it makes things much easier to address". All teachers and principals mentioned having a good relationship with Hispanic families; yet, low attendance to meetings and little involvement at school activities was a common complaint heard across schools. Elementary schools in the Reading school district have a parent outreach coordinator whose primary responsibility is to assist parents and facilitate home-school communication. Given the demographics of the district, speaking Spanish is a requirement to occupy this position. In all schools visited the parent outreach coordinators were of a Hispanic descent. Interestingly, second generation Puerto Rican women hold this position in all cases. According to them, being bilingual and Hispanic facilitates their work by making parents more comfortable to approach schools. Indeed, it was observed that parent outreach coordinators are usually the first and sometimes the only person that parents talk to when they walk in to schools. Despite this, all parent coordinators reported having a hard time involving parents more actively at school activities. Work, weather, fear, embarrassment, and apathy are some of the causes most commonly mentioned to explain low parental involvement.

> I invite parents to the school activities and they say "I have to work". And of course they need to work. But many others don't participate because they don't like to get involved and others because they feel quickly ashamed, like Mexicans. They say "I don't have papers and they get shy, afraid, because they think something bad is going to happen to them (Parent outreach, School 3).

> Attendance to activities varies. It depends on the weather, whether is dark outside or cold outside, because a lot of our parents would walk back to their homes. Sometimes we'd

> have forty, sometimes we'd have five. When [the activity organized] is more academic-related is a struggle [to bring parents in to school]. (Principal, School 2).

Hispanic families punctually attend parent conferences to be informed about their child's performance. Yet, attendance to other activities organized by schools to bring families together and inform them on various topics is meager. The parents interviewed say they don't attend these activities because of lack of time, family responsibilities, difficult schedules, and the existence of other commitments, such as Church-related meetings. "I always go to the parent conferences, not to the activities. Sometimes because I'm busy, sometimes because I forgot", a Mexican mother said. Another mom from Puerto Rico mentioned: "In addition to my work, I have a family and a house to take care of. That's why I don't come to the activities."

Parental involvement goes beyond participation in school activities; it entails supporting students at home by reinforcing what they are taught at school. Again, teachers and principals widely agree that the support provided by Hispanic families at home is minimum. This time, cultural differences between the Hispanic and American culture was the common explanation for this situation. Principals mentioned that they were aware of the more dominant role that schools play in Latin American countries where families entirely rely on schools to educate their kids:

> An educated woman from Puerto Rico said "in our Island you send your kid to school and it's like you deal with him, you spank him, you discipline him". But here is different, they need to understand that. (Principal, School 3)

> The schools there [in Latin America] take care of the children's education and so the parents rely on you to do that. And that's our job to take care of that. But I think they feel that's all our responsibility and… (Principal, School 2)

> We try to involve the parents as much as we can to help their child. But a lot of the times they are like, "you're the teacher, you're the principal, teach my child". (Principal, School 1)

In addition to cultural differences, various teachers and counselors mentioned that Hispanic families often times do not see a value on education, which in turn shapes their expectations about what their offspring can accomplish and their own involvement on their education. Parents in School 3 fill a family profile every year. In it, they express the expectations they have for their children when they grow up. According to one of the teachers, very few Hispanic families say college. Rather, many of them families write "working in the field, in a farm or at McDonalds". Interviews with some parents provide additional support to the existence of low expectations on education among Hispanic families. Although all the interviews conducted for this research concern elementary education, none of the parents interviewed mentioned college or getting a career when asked about the importance of educating their children. Getting a better job and becoming bilingual were the most common benefits of education, according to parents. From a development perspective, placing a low value on education may be influenced by intergenerational poverty. Ironically, having low expectations on education can also reinforce a cycle of deprivation.

6.7 SUCCESSFUL STRATEGIES

The variety of academic and non-academic challenges that Hispanic students face demand schools to implement practices and interventions intended to address the main needs of this population. Various practices were shown to be highly effective to enhance achievement of Hispanic in the schools visited. First, a strong leadership and the ability to set clear rules and enforce them constitute the minimum basis to encourage good performance and create a positive atmosphere among teachers and staff. School 1 and School 2, the two high-achieving schools, have Principals with very strong leadership skills, who set clear goals and who support everyone in their staff to work together as a team. Providing a clear leadership and creating order were the first actions implemented by Principals in School 3 and School 4 to boost performance. These Principals were working hard to provide leadership and promote collaboration among teachers, as described earlier. Second, constant monitoring and active use of data to design specific interventions was central to the sustained academic success of students in School 1. This school has the largest population of English learners as well as an important percentage of transient students. Despite this, School 1 has been successful in meeting average yearly progress for various years in a row and is one of the schools that exit more English learners from the language program every year in the Reading School District. Constant monitoring of performance, common planning and appropriate interventions seem to be the main formula for success in this school. No other school visited utilized data more intensively and actively than School 1. Pushed by the Principal, teachers and school staff extensively review and discuss achievement data with the ultimate purpose of informing instructional decisions: “It’s embarrassing to say, but when I started teaching, the teachers where grading and testing but was really with the goal of report cards, to put those grades in report cards. Now we look at data at a different way”. The literature

suggests that constant assessment matters to help students succeed academically. This chapter shows that monitoring is particularly important when students present many academic needs, as is often the case of Hispanic students. Teachers in School 1 frequently test their students in order to identify individual needs and differentiate instruction accordingly. Individualized interventions are jointly planned to provide extra support to those students who are struggling but also to push further those who perform well. The Principal at School 1 clearly stated her high expectations for achievement: "To make sure that everyone is making progress. Achievement is what all is about."

All schools considered the lack of English proficiency among students and parents as one of the most important challenges they face every day. Qualified resources and educators certified in English as a Second Language are indispensable to effectively address this challenge. The existence of bilingual and bicultural staff and teachers seemed particularly beneficial for all four schools. In fact, having bilingual staff was a must to establish communication between school and Hispanic families. All four schools visited have a bilingual parent coordinator and some bilingual teachers as well. Actually, schools make the best use of these resources by assigning Hispanic newcomer students to bilingual and ESL certified teachers. Bilingual teachers were particularly effective in facilitating the cultural and language transition of Hispanic students to U.S. schools. They also help parents feel more comfortable and at ease when interacting school staff. When bilingual teachers were not Hispanic, they still see many advantages of speaking Spanish: "My students are fascinated when I speak some words in Spanish" "Speaking the language definitely makes a difference in my work, especially with the newcomers". Perhaps more important than bilingual teachers is to have teachers certified in English as a Second Language. Even if these teachers may not know Spanish, they are highly qualified to serve the

language needs of non-English speaking students, whether they are Hispanic or not. These teachers develop strategies to facilitate comprehension and oral language development, such as the extensive use of visuals during class and group repetition for answering questions. In all four schools visited, ESL teachers demonstrated particular sensitivity to the language and learning struggles of these children:

> Before I took the certification I didn't understand many things. They have it harder than anyone because they are coming to school and learning English at the same time. (ESL Classroom teacher, School 1)
>
> Now I understand they are functioning in two languages and that's exhausting. Some of my kids get a lot of headaches and I know is a legitimate headache. They're translating all the time. (ESL Classroom teacher, School 4)

In addition to having qualified resources, a positive attitude towards the Spanish language seems to facilitate communication with parents and encourage their involvement in student's education. Many ESL teachers suggest parents to read or practice math in Spanish with their kids. "I know parents sometimes feel bad because they think they can't help their kids. But they can! I tell them to practice the skills in Spanish with them."

Mobility was a major challenge for School 1 and School 3. Between these two schools, School 3 stands out by assuming a social agency role and helping families to solve their basic needs, such as housing and jobs, so they can have a more stable life. The Principal in this school understands that families move a lot given their poverty level so he partners with local community-based organizations so "parents can get back on their feet". The parent outreach coordinator there plays a key role in this effort. She has a database with names of hospitals,

shelters, government agencies, and community-based organizations; she often refers parents to these services when they come to ask for help. For the Principal and staff in School 3, student achievement must be understood within the broader context in which families live. For this reason, this school goes beyond its traditional educative role and help families in a variety of issues, from housing to English classes and public assistance. At the time this research is written, performance data for the academic year 2011-2012 had not been released by the Pennsylvania Department of Education. Yet, data from the Reading school district shows that School 3 has improved in its achievement level during the last year. Although performance is influenced by many factors, the strategies implemented by School 3 are likely to have a positive effect on student achievement as it is the first time in five years this school is making academic progress.

Lastly, all Principals pointed to the low parental involvement of Hispanic families as an important challenge. Overall, schools have engaged in organizing diverse activities to bring parents in to school and make them feel comfortable. Although they have not been very successful, teachers and Principals work hard to build a home-school partnership and instill the value of education among parents. In the short run, teachers work under the assumption that Hispanic kids may not get enough support at home and adapt their classes and homework accordingly.

> You almost have to assure that you get the students to be able to learn by themselves. A good part of the day is really trying to get them independent, and being able to practice by themselves, and read by themselves. (Classroom teacher, School 3)

> We never sent anything new for homework. It's a review of all things they should be able to do so they shouldn't need too much parent assistance. (ELA teacher, School 2)

6.8 COMMUNITY INTEGRATION

The Theory of Segmented Assimilation, reviewed earlier, suggests that successful incorporation of immigrant families and the educational achievement of their offspring depend on three forces: the human capital that immigrant parents bring with them; the social context in which they are received; and the composition of the immigrant family (Portes & Rivas, 2011). All these elements were explored with families in schools visited. Interviews revealed important differences by national origin, suggesting the importance of accounting for this diversity. Human capital, understood as formal education and occupational skills, translates into competitiveness in the host labor market and into the potential for achieving desirable positions. Overall, the parents interviewed had less than college education, with Dominicans and Puerto Ricans having more years of formal schooling and Mexicans and Central Americans having the fewest. Fifty-four of the parents had at least some high school; almost all Puerto Ricans, one Mexican, and one Dominican mother. Only 18 percent of the mothers had completed some college; in all the cases they came from the Dominican Republic. The remaining 27 percent of the parents had completed between 5 to 7 years of formal education (elementary and middle school) and came from Mexico and Central America.

There were also differences with regards to occupational activity. Twenty-seven percent of the mothers interviewed had full time jobs; 18 percent were working part-time as babysitters and actively seeking and full-time job; an additional 18 percent were housewives who were not seeking a job; and 39 percent were unemployed and receiving at least one type of government public assistance, namely welfare, disability, supplementary security income (SSI), food stamps, cash, and housing. Puerto Ricans were more likely to be either fully-employed (66% of all full-employed) or to receive government assistance (100% of all interviewees in this category). In

contrast, Mexicans were partially-employed and said to struggle qualifying for a full job. The type of jobs parents hold also differed by country of origin; working Puerto Rican mothers worked within schools as secretaries, parents outreach coordinators, or as lunch ladies. Mexicans and Central Americans were employed, whether part-time or fully, in the meat-processing and agricultural industries. Dominican mothers were housewives and half of them also work as babysitters in a part-time basis. They also said to be socially active within the religious congregation they belong.

The transformation of human capital into job opportunities and upward mobility depends on the context into which immigrants are incorporated; that is, the context in which newcomers are received by government, society, and the local community. According to Portes and Fernandez-Kelly (2008), a receptive or at least neutral reception by government authorities, a sympathetic or at least not hostile reception by the native population, and the existence of social networks with co-ethnics pave the way to use whatever credentials immigrants bring from abroad. Variations in these elements appear to result in differences in their modes of incorporation. The city of Reading has a wide array of services offered by various entities, including state and local government, the Reading school district, community-based organizations, and education institutions. Services ranged from free classes of English as a Second language for adults, to classes to pass the U.S. citizenship exam, to help to apply for various types of government assistance, to a migrant program that facilitates the cultural, economic, and social adaptation of newcomer families. Despite most of these services have been offered in a constant basis for various years, knowledge of their existence was not generalized among Hispanics and neither their use.

Schools play a central role in informing parents about these services and usually refer families to specific providers. Schools, through their parent outreach coordinators, are often times the first place where Hispanic families ask for help, regardless of the type of need they have. According to school staff, not all Hispanic parents are equally comfortable, and thus likely, to approach schools to seek help. A parent outreach recognized clear differences by country of origin: "By nationality… there are people from the Caribbean that are more proactive and come and ask. But I've had Mexican moms that, because they don't have papers, they don't even try to get medical assistance for the children. They're afraid of coming in to school".

Among the families interviewed, Puerto Ricans and Dominicans were more likely to make use of English classes, especially if they international migrants. None of the Mexicans and Central American parents interviewed had taken English classes, whether because they did not have enough information about it or because they were too busy to attend. A similar pattern was found with regards to the use of other community and government services. Just a few parents have visited or received services from the *Centro Hispano*,[22] the major community-based organization in Reading, despite it has been serving the Latino community for four decades and offers several programs and services. Mexicans and Central Americans interviewed have heard of the Centro Hispano but never visited it or tried to get information about its services. About 18 percent of the families in this study, in all cases Dominican, were participating in the Migrant Education Program, a project sponsored and coordinated by the Reading Opportunities Center for Children (ROCC). This program provides supplemental educational and support services to children of migrant families employed in the meat processing and agricultural sectors. It assists

[22] Since 1970, the Hispanic Center offers social services, information and referrals, and work to support other organizations in Berks County. Created to serve the Hispanic community in the greater Reading area, its mission is to support and enhance the acculturation of the Latino population through collaborative initiatives. See http://www.centrohispano.org/indspa.html for more information.

local school districts with improving and coordinating the educational continuity for the children of migratory workers who have had their schooling interrupted.

In addition to showing dissimilar levels of knowledge of and access to government assistance and other social services by national origin, Hispanics are perceived differently by schools and the Hispanic community itself. Various parents, as well as school counselors and teachers, referred to the existence of two major groups or "subcultures" of Hispanics coexisting in Reading. On the one side, there is a group of Hispanics perceived as hard-working people, responsible parents, and uncomplaining workers willing to take low-paid jobs in order to support their families. On the other side, there is a group seen as knowledgeable of the welfare system and who has found a living on government assistance. Puerto Ricans were often identified in the second group while Central American and Mexicans were put in the first one. Although various U.S. teachers and counselors shared the perception of Hispanics as a heterogeneous group, it was teachers and parents of a Puerto Rican descent who were the most critical about country group differences.

> You can see a subculture. For instance, in Puerto Rico we are part of the U.S. And we have some benefits but not all the benefits that exist here. In Puerto Rico there is no welfare, there's no SSI. We don't have money for that. But many people know they can get all these benefits here and that's why they come [ELA teacher, school 1, Puerto Rico].

> You can see that Puerto Ricans don't want to work. They get all types of assistance and don't invest it in their children. They go and buy clothes for themselves or have their

nails done, but they don't buy books or spend time with their children. It's a shame because I'm Puerto Rican too. [ELA teacher, school 1, Puerto Rico].

Mexicans don't come here to get money out of government; they came to work as beasts for very little money. They work and live in the mushroom fields in insalubrious conditions. They have a work ethic that is precious. But then you see others than come here and don't want to do anything; don't want to do anything here and neither in Puerto Rico. […] I say to the Principal and people, let's go to Puerto Rico so you can see the hard-working Puerto Rican, middle class. This is not representative of what we are; this is a subclass that comes to live out of the system, that doesn't want to work. [Counselor, School 2, Puerto Rico].

I tell you something, Mexicans are first, Ecuadorians are good people, Nicaraguans also. All the people that come from down there, sometimes because they have suffered, they make a greater effort. Maybe that's why they are like that. That's not the case of Boricuas[23], because we are part of the U.S [Mother, school 4, Puerto Rico].

There are some parents who truly work a lot and cannot come to school. But there are others who don't work at all and don't get involved in their child's education either. Sometimes we call the parents because their child got sick and they show up in pajamas at noon, or they come an hour later even if they live right across street. I had a mom

[23] Puerto Rican is the Spanish word used to refer a person born in Puerto Rico. Boricua is the term used in Taino, the indigenous group prevalent in the island by the time it was conquered by the Spaniards, to refer to people in Puerto Rico. Both Boricua and Puerto Rican are used interchangeably. Sometimes Boricua is also applied to U.S.-born offspring of Puerto Ricans.

coming in to ask me to test her daughter for disabilities. Her neighbor told her she was getting 700 a month because her daughter was identified with an IEP. Now she thinks that's fabulous and wants her daughter to get tested as well. (School counselor, U.S, School 4).

Differences among Hispanics also find expression within the classroom. Although not a generalized phenomenon, teachers mentioned that Hispanic students tend to differentiate among themselves based on nationality, particularly so in higher grades. Principals acknowledge the existence of greater freedom in higher grades as a potential cause for these behaviors. While teachers decide how to group students in the first grades of elementary school, students acquire more freedom to mix with their classmates as they advance to higher grades. Is then when they group with peers that share the same background, experiences, and culture.

The one problem is not the differences in the languages, is the cultures against each other. Is within the own Hispanic culture. Is like "we 're Puerto Rican, we're better than you Dominican". You know, is within the own Hispanic culture that are demeanors about culture. Is not about the kid himself or herself; is about where they come from [ELA classroom, grade 4, School 1].

Groups not getting along definitely… the younger the students the more they play with anyone but as they get older... definitely they have distinctions within the Hispanic community. You know, they are Mexican, they are Dominican, and they are Puerto Rican. And sometimes that causes some social issues because they tend to form little groups [Principal, school 2].

In particular, a teacher mentioned that negative stereotypes associated to specific countries may derive from the fact that students from those countries are a minority within the Hispanic community.

> Oh, being Mexican it's very bad in my classroom, for years now. I feel bad because they [students] are part of it: "Mexicans are this, Mexicans are like that… Where they get that? I don't know. I don't know. I don't always have the time to have a discussion as years come by, but I've seen it more and more, always against the Mexicans and probably because they're the minority here.

Despite of being the largest population group, 56% of all Reading residents, Hispanics do not seem to socialize between them, neither to conceive themselves as an integrated community. "There's no union here; in this state we don't get along. Everyone is fighting with everyone. People of the same race[24] are fighting for nothing" (Mother, School 4). In a city where more than half of population speaks Spanish, people may like to differentiate from each other based on national origin instead of language.

> No, I think they [Hispanics] are so very separate. Even within the Hispanic culture, I think they are very separate. I don't think they integrate well at all. And I don't know what would that be but there are groups, and you can see the separation of the groups. Even as far as integrating or acculturating, they keep… they keep their own culture. And here, you don't need to speak English. [ELA Classroom, 4 grade, School 1].

[24] In this particular phrase, race is used in a different way than the conventional meaning applied by the U.S. Census. This parent used "same race" to refer all Hispanics or Latino. In the census definition, Hispanics is an ethnic identification, not a race. For instance, Hispanics can be of any race, Black, White, multiracial, etc..

Community integration also reflects on socialization patterns, which for Hispanics in Reading are heavily based on kin networks and sometimes in religious associations. When parents were asked about their friendships and social networks, an overwhelming majority mentioned not to have friends. Eighty-two percent of the parents say their extended families –if residing in Reading- and their acquaintances from religious congregations constitute their main social nucleus. Phrases like "I'm a home person", "I don't like to hang out with people", "I'm very reserved", or "my friend is God" were common answers parents gave to explain the absence of friends or acquaintances outside their own families: "As I said, it's only me and my children… there are no friends. The only friend is God and he never fails". A plentiful of religious congregations coexist in Reading, most of them of Christian denomination. Some parents belonged to Christian religious groups and were very active in religion-related activities, which make them more likely to socialize with people from other countries and races: "Mexicans, Dominicans, Boricuas, Whites, from everywhere. We are all together in the congregation". For these families, Christian congregations have played a central role in their socialization and adaption process. Indeed, 18 percent of all families interviewed said they migrated from their countries to Reading because of the opportunity to join and collaborate with a specific Christian congregation.

From those parents that did not mention to belong to a religious congregation, only 18 percent talk to or socialize with people from countries other than theirs. However, even in these cases they perceived divisions and clash of cultures between Hispanics.

> There are differences in the way how Hispanics treat each other. You can see it and feel it. People who speak Spanish divide themselves. My friends are only Mexicans, not from other places. I only say hi to them (not Mexicans) and that's it. [Mom, Mexican, School 3]

> Well… until now I talk to everyone… I haven't… I don't… But, yes, I see many people acting like "Mexicans here", "Boricuas there". Yes, I see people don't getting along. [Mom, Mexican, School 1].

In summary, Hispanics in Reading do not seem to constitute a homogenous, cohesive, and harmonious community. Instead, people form groups and congregate around national origin. Nationality also serves to mark clear differences on the way how Hispanics are perceived in the community. Hispanics themselves differ in their knowledge of and their access to public assistance and social services. All Puerto Rican families interviewed in this dissertation were receiving, or had received in the past, at least one type of government assistance, being welfare, cash, and supplementary security income the most common. They also were more knowledgeable about local community-based organizations including services offered, eligibility criteria, and application process. A similar pattern was observed among Dominican families interviewed. At the other side of the spectrum are Mexicans and Central Americans, who often times were uninformed about local providers and the social services offered by them. Such lack of information seems to be part of the reason for their less frequent use of government assistance. Another reason seems to be related to their immigration situation and non-citizenship status. A

Mexican mother said, when asked the reasons to not apply for welfare or SSI: “That’s only for citizens or those who have papers”.

Among Hispanics, Puerto Ricans are more likely to get government assistance than other Spanish-speaking groups because of their U.S. citizenship. Despite most Hispanics in Reading are economically disadvantaged, just those who are U.S. citizens or Pennsylvania residents are eligible for government benefits, namely welfare, SSI, food stamps, or disability insurance. On the contrary, social services offered by local community organizations, such as ESL classes, mental health services, and supplementary educational services for migratory families, do not have a citizenship or residency requirement. Despite being accessible to the entire community, Mexican and Central American families interviewed for this dissertation did not make use of services offered by local providers either.

6.9 SUMMARY

This chapter provides additional support to the main results derived from the multilevel analysis; English proficiency, learning disabilities, poverty, and mobility, have an important impact on achievement of Hispanics. Congruent with findings from the previous chapter, school principals and teachers consider lack of English proficiency as one of the major academic challenges in relation to teaching Hispanics. Interviews also revealed the ways in which these factors influence student performance. For instance, English proficiency influences achievement not only by imposing an additional task on students, but also by limiting the level of parental involvement in school activities. The existence of learning disabilities, although the most influential variable in terms of points taken out of standardized tests, was rarely mentioned by

school staff as an important challenge or constraint. On the contrary, teachers and principals highlighted geographical mobility as quite detrimental for student achievement. It interrupts schooling but also impedes teachers to make proper assessments of students' needs and design interventions accordingly.

Recognizing that the variables analyzed in the multilevel analysis are by no means exhaustive in explaining achievement, this chapter sought to identify additional achievement determinants based on the experience of teachers and principals. Poor background knowledge was considered, along with lack of English proficiency, the most important academic challenge to provide effective schooling to Hispanic students. In addition to academics, low parental involvement, cultural differences about the role of school and family in education, and poor expectations on education were mentioned as important challenges, too.

A third purpose of the case studies was to illustrate school practices and strategies associated with a good performance of Hispanic students. The four schools visited have student bodies with similar characteristics; a comparable percentage of Hispanics, a majority of economically disadvantaged students, and about one fourth of their population considered English learners. Despite these similarities, schools differ in their performance. Two schools have been successful in enhancing achievement of their entire student population These schools can be generally defined as well-functioning; the principals exert strong leadership; discipline is strong and school staff is capable to enforce rules; student achievement is effectively and constantly monitored; and the entire school works as a team. In particular, School 1 stands out for its joint-planning strategy and implementation of a highly effective communication and collaboration system. Teachers, instructional coaches, language specialists, and the Principal meet in a constant basis to discuss students' progress and design individualized interventions.

Same-grade meetings and across-grade meetings are intended to contribute to strategy-sharing and to set clear expectations about what a student is supposed to learn in each grade. Although these practices are likely to improve achievement for all students, they seem to be particularly relevant and effective for minority students with many interrelated needs, as Hispanic students are.

In addition to offer a well-functioning environment, these schools have qualified staff specially trained to serve English learners. In school 1, most ESL teachers are also Spanish-English bilingual and bicultural, which seems to facilitate adaptation of recently arrived students and families. In the other two schools, knowledge of Spanish was a great plus to teach English to Hispanics, according to ESL teachers. The existence of bilingual staff also contributed to ease communication with Hispanic parents and bring them in to school more often, as declared by parent outreach coordinators.

Overall, Hispanic students share some characteristics that set them apart from other minority groups, for instance poverty, poor academic background, and lack of English proficiency. This chapter illustrated many of these factors co-occur and reinforce each other in a complex dynamic. For example, poverty is an important trigger of geographical mobility. Similarly, low parental involvement is closely intertwined with poverty, a poor command of English among parents, cultural differences about the roles of schools and families, and low expectations on education. The case studies here analyzed, and in particular the study of the two high-performing schools, suggests that strategies and practices intended to improve achievement of Hispanics must address these interrelated challenges. While Hispanic families in Reading are mostly economically disadvantaged, they also differ by nationality. Hispanics from Mexico and Central American are perceived more favorably by the community and school staff than Puerto

Ricans. Also, Puerto Ricans and Dominicans have a greater knowledge of and access to government assistance than Mexican and Central American families. Further examination of differentiated access to social and supplementary services is important given its potential effect on student achievement. Hispanic families in Reading are highly impoverished and their children enter school with various shortcomings; therefore, assuring that all families have readily access to available social and educational services is likely to positively contribute to their school performance.

The next chapter integrates the quantitative and qualitative analyses and discusses major findings on relation to the research questions considered this dissertation. It concludes with specific policy recommendations and effective educational practices intended to better serve Hispanic students.

7.0 CONCLUSION

The history of immigration to the United States dates back to its creation as a nation. Although the immigrant influx occurred between 1890 and 1920 comprised a larger percentage of the total U.S. population than it does today, the absolute numbers of current immigrants exceed any experience before (Rodriguez, 2008). Since the 1990, more immigrants have entered the United States than at any other point in history, thus dramatically changing the demographic composition of the country (Hirschman & Massey, 2008). Recent immigrants come primarily from Asian and Latin American countries and their children constitute the fastest growing segment of the nation's population today. Educating these new students has become a major policy concern as their adaptation as they reach adulthood and seek to integrate socially and economically will greatly depend on their academic attainment (Portes & Rivas, 2011). Hispanic students, in particular, represent a specific challenge to existing education policy with their consistently low achievement outcomes, high dropout rates, lack of English proficiency, and disadvantaged socioeconomic backgrounds.

In an attempt to understand the challenges Hispanic students are facing, and the reasons to their failing in the newly immigrant receiving states, this dissertation studies the educational outcomes of Hispanic students in Pennsylvania public elementary schools. It aims to systematically identify necessary and sufficient determinants of school achievement and to present best practices in the field. As such, the dissertation focuses on three questions: What are

the effects of student background characteristics and school attributes on individual performance of Hispanic students? What are the main challenges that schools encounter when serving this population? And, what policies can be recommended to enhance the educational achievement of Hispanic students? To answer these questions confidently, the dissertation draws on the literatures from Public Policy, Applied Linguistics, and Education, and applies a mix of quantitative and qualitative methods in manipulating and analyzing data. As a means to conclude, this final chapter integrates and summarizes major findings from the Hierarchical Linear Modeling and lists a number of recommended policy actions adopted from the best practices in the case studies (see Table 7.1). While the conclusions predominantly speak to the state of Pennsylvania, they remain generalizable to most states that have recently been facing a growing influx of Hispanic immigrants. The findings can be summarized in four categories: student and school determinants of achievement; policy challenges; best educational practices; and differences within Hispanics.S

7.1 MAJOR DETERMINANTS OF HISPANIC STUDENTS' ACHIEVEMENT

Mirroring national trends, Hispanic students in Pennsylvania face various interrelated challenges when it comes to educational achievement. The quantitative analysis illustrates that student background is an important determinant of their achievement, and its effect on academic performance –as measured in standardized tests- is larger than those derived from school attributes. The analyses in this dissertation point to various background characteristics that are influential on students' academic success: English proficiency of students and parents themselves, poverty, geographical mobility, learning disabilities, and parental involvement. Also,

students' background knowledge, defined by the literature as all knowledge that students have that is relevant for acquiring new knowledge (Biemans & Simmons, 1996), stands out as an important determinant of Hispanics' achievement. Interviews with principals, teachers, parents, and counselors, revealed that Hispanics are likely to be very lacking in their previous schooling, whether they are immigrants or U.S.-born, which complicates and delays their learning once in U.S. schools. In addition to having individual effects, these variables also interact and reinforce each other's influence. For example, while poverty independently impacts student achievement in a negative way, it also triggers geographical mobility, and it is likely to lead to low parental involvement. On the other hand, achievement is positively correlated with a good command of the English language of students and their parents, with high parental involvement in school activities, and with strong background knowledge among students.

Achievement of Hispanic students is also affected by school characteristics. Smaller schools appear more conducive for those Hispanics who have learning disabilities and/or are English learners. This positive effect of the size of the school, however, needs to be conditionally accepted. First, smaller schools are associated with more personalized attention, which overall is positive for ELL and IEP students. However, this is less than an automatic relationship. In other words, one cannot automatically assume that all smaller schools have sufficient and highly trained staff able to address the needs of these students (e.g. ESL and special needs teachers). Secondly, minority students tend to attend urban schools more, which often times have larger enrollmentthan suburban schools and are likely to offer less individualized attention.Second paragraph.

The proportion of Hispanics within each school is also an important school determinant of achievement among Hispanics as it negatively influences achievement of this group.

However, and contrary to what research in bilingual education suggests, Hispanic English Learners are not significantly affected on their achievement by a large proportion of coethnics. Indeed, the qualitative analysis highlights that a high concentration of Hispanics may have some advantages for teaching ELL students. First, interviews and classroom observation revealed that those English learners with a higher proficiency help teachers translating classroom instructions to newcomer students or to those with a lower command of English. Also, instruction becomes easier when all or most of the English learners in a classroom speak the same language. The fact that most English learners in the schools visited spoke Spanish facilitated communication as teachers easily drew on phrases and words in that language to instruct and reinforce learning.

7.2 POLICY CHALLENGES

As an ever-growing immigrant group, Hispanic students are facing various academic and non-academic challenges in existing public education systems. Lack of English proficiency emerged as the most important academic impediment to Hispanic students' achievement, and its effect appeared to be accumulating in proportion in higher grades. This, in turns, puts a strong pressure on schools for developing English language resources rapidly and early on. Providing effective schooling to ELL students requires highly trained teachers capable of differentiating instruction according to the various language levels students have. School districts in Pennsylvania like Reading, which has experienced a rapid demographic change, are already facing a shortage of qualified teachers. Reading School District's Director of English Language Acquisition points to the district's need for additional ESL teachers to effectively serve their ELL population, which comprises about 20 percent of all K-12 students in Reading: "We're still looking to see why they

(Hispanic students) cannot pass the test to exit the ELL program. My concern is that they are not receiving enough direct instruction because we don't have enough teachers to serve them."(Personal communication, May 18, 2012). In the four schools studied, the ELA teachers, those dedicated just to teach English language, serve an average of ten classrooms and newcomer groups of up to twenty students on a daily basis. The second biggest challenge educators encounter in relation to Hispanics is deficient background knowledge. Interviews illustrate that Hispanics are likely to enter U.S. schools lacking relevant contextual knowledge necessary to learn what they are expected at each grade level. Common academic gaps occur with regards to numbers, letters and alphabet sounds, and general knowledge related to natural sciences. This situation complicates and delays instruction as teachers need to fill in those gaps and assure that students have adequate baseline knowledge every time they teach a new theme. "They don't know how a cow looks like or the sound they make. Things we assume kids would know, they don't. They lack a lot of background knowledge when it comes to teaching. That's our biggest challenge." (ELA teacher, May 8, 2012).

On the other hand, non-academic challenges faced by Hispanics in Pennsylvania include low parental involvement, high levels of geographic mobility among Hispanic families, as well as poverty and related emotional distress. The case studies demonstrate a cultural difference between U.S. and Latin American families with regards to the role they are expected to play in their children's education. In U.S. school systems, parents are expected to take on an active role in shaping the education their children are to receive. For Hispanic immigrant families, on the other hand, education is primarily seen as the teachers' and schools' responsibility, which explains their limited involvement. Poverty is also prevalent among Hispanic families, and is likely to limit parental involvement. An important proportion of Hispanic parents have more than

one job with working hours stretching beyond the school day and/or have lengthy commutes to work. As such, they have much less time for extracurricular activities on school responsibilities. Finally, and yet perhaps more gravely, in Reading school district, poverty is named to be the root cause for both emotional stress and interpersonal violence affecting mostly Hispanic students' school attendance and achievement. Such stress triggers are in turn blamed for increasing behavioral problems in the classrooms and stretching the already limited resources public schools have to address social issues in addition to academic ones.

7.3 PROVIDING EFFECTIVE SCHOOLING TO MINORITY STUDENTS IN DISTRICTS WITH RAPIDLY CHANGING DEMOGRAPHICS

Given the nature of the interrelated causes of academic performance, schools with sizable Hispanic student bodies are challenged to tackle education policy at multiple fronts. The school representative of the high achieving schools perfectly illustrates a series of complementary strategies aimed to enhance achievement of immigrant students. Despite high levels of poverty (95%) and geographical mobility (60%) that characterizes its student population, this school has managed to make adequate yearly progress for multiple years in a row (Reading School District, AYP report, 2013). This school constantly monitors student's needs and progress utilizing four different achievement and English language tests, some of them applied more than once within the academic year; it has strengthened communication and collaboration between staff by having global, same-grade, and across-grade meetings with teachers and instructional coaches to discuss performance data and do join-planning; and it applies clear incentives for high performance, such as setting learning goals at each school grade so all teachers know what are the expectations

when students cross from one level to another. A distinctive feature of this school is its use of performance data in identifying learning gaps, which in turn is used to inform instructional decisions. Students at this school receive highly individualized interventions. Specifically, they have a daily "acceleration block" where they are grouped according to their needs so teachers can reinforce specific skills; for instance, comprehension, phonics, vocabulary, writing, or math. Moreover, students are actively involved in monitoring their own progress by graphing their scores after every test they take. Instead of being pushed to obtain a specific score, teachers encourage and reward students for making progress. Furthermore, there is a strong emphasis on teamwork emphasized by the Principal. Teachers work in same-grade teams to design interventions and students work in groups for most of the activities throughout the day. Although only grades third to fifth are tested in the PSSA, the Principal assures that teachers of lower grades are equally involved and contribute to the school's achievement goals: "Making AYP does not rely just on grades 3 through 5, although those are the only ones tested. It's a collective effort of teachers from pre-K to 5th" (Principal, School 1, May 1st, 2012). While immediate intervention and monitoring strategies are likely to increase the quality of education for all students, they are particularly effective in reaching out to minority students and keeping them from falling further behind.

In addition to these general strategies that are proven to improve performance, the schools studied implement specific practices to tackle English language needs, poverty-related issues, limited parental involvement, and high mobility. In order to address language needs of English learners, especially those new to the U.S. schools, securing ESL certified teachers appears to be a necessary investment. Also important is to have a student-teacher ratio that allows teachers working with English learners for larger periods of time a day and not only 40

minutes, which is the duration of a daily English intervention in Reading. Bilingual staff within the school administration, in addition to ESL certified teachers, greatly facilitates communication with Hispanic families and ease their adaption process. According to ELA and ESL teachers, inclusive classrooms are also a boost to English language acquisition. Schools studied in Reading School District have managed to make the best use of available resources by assigning newcomer students to classrooms with ESL certified teachers. This strategy, which seemed to be highly effective, requires having at least one ESL certified teacher at each grade level. Reading's experience educating English learners is especially instructive for districts undergoing similar demographic changes. For instance, districts may partner with local education entities, such as colleges and universities, to provide low-cost or free of charge ESL certification to public school teachers. Meanwhile, schools may consider providing incentives for their staff to get certified. Many elementary public school teachers in Reading were able to become certified thanks to a partnership with Penn State Berks County, which has offered one-year ESL certifications to teachers at no cost.[25] In contribution, some schools provide transportation to those teachers getting certified.

Two out of the four schools studied have a serious problem with the high rates of geographic mobility in their student body. Addressing this challenge, a number of strategies appear to have been promising both the school and the district level: first, schools may want to test students as soon as they are transferred so any particular learning gaps or needs are identified and addressed as best as they can before the student changes schools again. Another approach recommends schools to take a social agency role and address mobility triggers, as was the case

[25] Information on the collaboration with Penn State Berks was provided in several interviews with teachers and principals. Such collaboration occurred within the ISLAS. For more information see http://www.bk.psu.edu/30157.htm

with the third school studied for this dissertation. Staff at this school are knowledgeable about local social service providers and often times refer parents to them. Common referrals include domestic violence, housing, and job-searching issues. At the district level, Reading has made its ESL program uniform across all public schools in terms of content, objectives, materials, and overall implementation (Reading District's ELA Coordinator, personal communication, May 18, 2012). This policy seeks to provide a level of continuity for the ELL students as they move within the district. Parental involvement was another important challenge mentioned by schools with regards to Hispanic families. Language barrier, poverty and culturally different expectations from schools appear to prevent Hispanic parents from actively participating in school activities. While it is difficult to address the entire set of causes that limit Hispanic parents' involvement in their kids' education, schools that have built accessible home-school communication channels through bilingual staff and paperwork have demonstrable success.

7.4 DIFFERENCES WITHIN HISPANICS

While Hispanic students as a group face certain set of challenges, they also differ among themselves according to the origin of their emigration. The different countries of origin serve as the main way to differentiate Hispanics, both by Hispanics themselves and by the communities in which they live. At the risk of stereotyping, some Hispanics in Reading, specifically those from Mexico and Central America, are perceived as hardworking, reserved, and responsible. Others, especially those from Puerto Rico, are often times seeing as irresponsible and using government assistance as a means to enhance their dependence on the community resources. Hispanic groups in Reading themselves differ in their knowledge of and access to government

assistance and other social services. A major difference relates to their immigration status - whether they are lawfully or unlawfully in the U.S- and their citizenship rights. For example, Puerto Rican families seem more likely to receive government assistance than other Hispanics. Because they are U.S. citizens, they have immediate access to a broad range of benefits including welfare, supplementary income and disability assistance. Puerto Rican families also appear to know more about the U.S. education system. For instance, students in Puerto Rico are similarly tested for learning disabilities and receive IEP (individualized education program). These assessments are easily transferrable to U.S. schools when they move to mainland. Such set of familiar practices allows them in turn a greater access to social services and a speedier integration to the American school system, giving them a reasonable advantage over other Hispanic families.

Dominican families interviewed for this dissertation follow next in their access to and knowledge of social services, particularly with regards to those offered by local providers. The Dominican parents interviewed for the dissertation were attending ESL classes for adults, as well as using additional language and education services for their children provided by the Pennsylvania Migrant Program. Interestingly, most Dominican parents interviewed had recently migrated to Reading and in all cases with help of a local Christian congregation and kin networks. On the other end of the spectrum are families from Mexico and Central America, who seem to be the least informed about social services. These families reported to have never visited local providers, or have inquired about community services to schools. Such lack of interest on the surface seems to be part of the reason for the prevalent perception in the community about Central Americans and Mexicans as being afraid of approaching schools and local organizations.

It is relevant to examine this differentiated access to social and supplementary services among Hispanic families because of its potential relationship to student achievement. The qualitative and quantitative analyses show that Hispanic families in Reading are highly impoverished and their children enter school with various shortcomings. The living conditions in which a child is part of, and the resources that their families have, as this dissertation confirms, are important determinants of a student's school performance. Therefore, access to additional social, health, and educational services is likely to positively contribute to students' school performance. The fact that some families are being left out of the benefits intended to serve them, voluntarily or involuntarily, may entail that some Hispanic students are more at risk than others, thus creating a most vulnerable group within an already disadvantaged population.First paragraph.

7.5 LIMITATIONS OF THE CURRENT STUDY AND POTENTIAL FOR FUTURE RESEARCH

Research addressing differences in academic trajectories between different groups of Hispanics is scarce and relatively new. Achievement data is not disaggregated by national origin, which is a major impediment for comparative analysis. The Children of Immigrants Longitudinal Study (CILS) remains as the only major dataset that collects achievement data (GPA) and national origin of second generation immigrant youths but is limited to San Diego and South Florida, both traditionally immigrant receiving communities (Portes & Rivas, 2011; Hirschman & Massey, 2008). The CILS focuses on high school students and analyzes elements for upward and downward assimilation. As this dissertation started to highlight, in recently immigrant receiving communities such as Reading Pennsylvania, documenting achievement differences by

country of origin is a promising way to understand why some students fail and others succeed, and to develop policies to efficiently address such gaps before they got too taxing on the educational resources. To that end, studies analyzing educational trajectories at elementary and middle school will be particularly relevant given the importance of doing early interventions. As a category, Hispanic is an umbrella term that brings together Spanish-speaking people from a vast geographical region. This umbrella definition conceals important variations among the so-called Hispanics. This dissertation confirms that these variations are worth noticing, documenting, and addressing since the variations themselves are part of the explanation of achievement gaps. Furthermore, Hispanics, together with Asians, are the major immigrant populations in the U.S, and thus have a significant impact on the overall achievement levels.

This dissertation started by asking theoretically important but also policy relevant questions on why Hispanic students of an immigrant origin have fallen behind in the current education policies, why they have achieved less and dropped out more. In answering those questions, it sheds light on the growing demands on existing and limited resources education policy provides, especially in states and districts experiencing rapid demographic changes. It does so by studying public elementary schools in one such district, Reading in the state of Pennsylvania. Both the quantitative assessment of achievement scores and in-dept studies of four schools highlight the complexity of educational challenges Hispanics students present and the urgency and relevance to address them comprehensively. To those ends, the findings also suggest new methodological venues where the limitations of this research can be addressed effectively in future research. For example, the analyses conducted here utilized a single outcome measure, standardized scores obtained in the PSSA test. Other outcome measures such as dropout and graduation rates are likely to increase the validity of the findings. Secondly, the

PSSA tests have been changing every year making it difficult to psychometrically compare across years, and thus limiting the potential to follow individual student trajectories. Finally, the findings in this dissertation are based on public elementary schools and it would be extremely instructive to comparatively study policy challenges and strategies in middle school years.

Immigration has always been an ongoing process in the history of the United States. Immigrants from all over the world strengthen the economic and social make up of the country. Hispanics already constitute a large proportion of the current immigrant stock and are projected to become the first minority group to account for a third of the total population by 2050 (Hirchsman & Massey, 2008). It is imperative we value immigrant families and their children as the assets they are to this country. In order to do that, we need to promote much broader educational and social policy initiatives to educate and involve Hispanic immigrant parents in their children's education, improve their working and living conditions, respect their culture, and help them integrate into the mainstream society. As a first step, we need to understand better the limitations of the existing systems and assess the effectiveness of different strategies for immigrant children to successfully incorporate them into the public education system. Such investments in the education policies are likely to benefit not only the immigrants themselves but also the societies that are now largely part of and contribute.

Table 7.1 Synthesis of findings

Research question	Hierarchical Linear Modeling	Case studies
What are the effects of student background characteristics and school attributes on Hispanic students' performance?	**Student background .**	
	In order of importance, learning disabilities, English proficiency, geographical mobility and poverty, all negatively affect achievement. Effects of learning disabilities and English proficiency on achievement increase in higher grades. Effects of student background override those of school characteristics	Additional determinants of individual achievement are (poor) background knowledge, low parental involvement, and lack of English proficiency among parents. Interviews confirm the relevance of poverty, mobility, and English proficiency. Student's background characteristics interact and reinforce each other. For instance, poverty accentuates mobility, poor background knowledge, and low parental involvement.
	School attributes	
	Ethnic segregation negatively affects achievement of Hispanics as a group, but does not put an extra burden on those who are English learners.	Ethnic segregation facilitates, to some extent, the delivery of English language instruction: a) easier to adapt instruction when most English learners speak the same language; b) advance students translate for newcomers and thus facilitate delivery. Ethnic segregation is highly associated with income segregation, which poses additional challenges to schools and urges for additional strategies to deal with poverty-related issues. Ethnic segregation accentuates differences within the minority group, which may alter the classroom dynamic.
	School size does not affect Hispanics as a group. Yet, smaller schools ameliorate the effects of learning disabilities and lack of English proficiency on achievement.	Student-teacher ratio, rather than school size, appears to enhance student achievement. Yet, larger schools tend to have more crowded classrooms than smaller schools. Additional school practices/attributes that affect student performance are principal's leadership, a functional monitoring system, joint-planning, sufficient and qualified ESL teachers, and bilingual staff.

Table 7.1 Synthesis of findings (Continued)

Research question	Hierarchical Linear Modeling	Case studies
What are the main challenges that schools and educators encounter when serving this population?	Based on their effects and increasing impacts, the most urgent situations to address are the existence of learning disabilities and lack of English proficiency.	Lack of English proficiency and poor background knowledge are the biggest academic challenges that teachers and school principals face. Among the non-academic related challenges, constant mobility and poor to null involvement of parents in their children's education were the most cited. Having their basic needs met and dealing with emotional distress related to poverty were relevant challenges mentioned in at least one school.
	Enhance achievement while addressing multiple academic needs.	
What strategies, policies and school practices can be recommended to enhance achievement of Hispanic students?	Set incentives for high performance	Constantly monitor students' performance; use data to detect learning gaps and design individualized interventions; then, monitor progress. Bring teachers and instructional couches together to discuss students' data and do joint-planning. Involve students in monitoring their own progress. Help them to set learning goals and reward progress. Promote and strengthen communication channels between teachers, both across and within grades. Establish clear learning expectations by school grade and make everyone in your staff aware of it.
	ELL and disabled students	
	Emphasize ESL and special needs instruction in the early grades, particularly with those students enrolled in the same school from kindergarten of grade 1. Promote enrollmentof ELL and IEP students in smaller schools, but make sure those school have sufficient ESL and special needs resources.	Invest in ESL and special-needs certified teachers. Resources must be sufficient so there is a decent student-teacher ratio. If ESL resources are limited, assign newcomers to classrooms with ESL-certified teachers. Inclusive classrooms –those including ESL, benchmark, gifted, and special needs students- provides ELLs exposure to native English speakers thus contributing to language acquisition

Table 7.1 Synthesis of findings (Continued)

Research question	Hierarchical Linear Modeling	Case studies
What strategies and practices could contribute to enhance achievement of Hispanic students?	**ELL and disabled students**	
	Set incentives for high performance	English learners thus promoting English language development Hire bilingual staff and encourage ESL teachers to learn Spanish.
	Geographical mobility	
	Emphasize ESL and special needs instruction in the early grades, particularly with those students enrolled in the same school from kindergarten of grade 1. Promote enrollmentof ELL and IEP students in smaller schools, but make sure those school have sufficient ESL and special needs resources.	Act proactively; test students with a history of mobility right away and put referrals if necessary. Address mobility triggers: meet with parents to see if access to additional support services would help them to stabilize their situation. At the district level, work to homogenize curricula of regular and ESL programs so mobile students can have some continuity in their learning process if moving within the district
	Poverty-related issues	
		Partner with local community-organizations and agency governments to know about their services and refer parents to them when needed. (e.g. shelter, behavioral and mental health, government assistance, job centers)
	Parental involvement	
		When possible, hire bilingual staff in the office. People from the community particularly suitable to receive families. Explain what is expected from parents in U.S. schools. Cultural differences matter. Keep all brochures, notifications, and paperwork intended to inform parents bilingually. Make an extra effort to involve difficult-to-bring and reserved parents.

APPENDIX A

CONTACT LETTER FOR SCHOOL PRINCIPALS

Dear _____,

My name is Monica Jacobo-Suarez and I am a doctoral student at the University of Pittsburgh's Graduate School of Public and International Affairs. I am currently conducting my dissertation research which focuses on educational programs for Hispanic students in Pennsylvania elementary schools. The major emphasis of my research is on identifying school, family and community factors influencing the achievement of Hispanic students.

As part of my research, I would like to speak with individuals who have been involved in education of Hispanic students, whether as school principals, teachers, or parents. While conducting my research, I have identified your school as one serving Hispanic students. For this reason, I would be very grateful if I can take some of your time to interview you on this theme. Also, if you could direct me to specific teachers who have been involved closely in teaching Hispanic children I would greatly appreciate it.

I would like to let you know that my research has been approved by my doctoral dissertation committee chaired by Dr. Muge Finkel. I have also received the pre-approval of the University of Pittsburgh Institutional Revision Board to conduct this study.

Thank you very much for your assistance,

Monica Jacobo-Suarez
Graduate School of Public and International Affairs
University of Pittsburgh
(412) 478-1671
E-mail: mlj21@pitt.edu

APPENDIX B

INTERVIEW PROTOCOLS

B.1 PARENTS

I. Parent's background information
   a) How long have you been living in this district; state; country?
   b) With whom do you live here (spouse, children, parents, relatives, other)?
   c) How many children do you have? How many of them are enrolled in school? In which grades?

II. Perceived importance of education and language(s)

   a) What does it mean for you that your child can speak Spanish? Are there any cultural values/advantages that you associate with speaking Spanish? What does it mean for you that your child can speak English?
   b) What do you think about your child(ren) being taught in English, Spanish? Do you see specific advantages of speaking each language, or both?
   c) What language do you use at home to communicate with children and spouse? What language is mostly spoken between your children?
   d) Now I will ask you about the language ability of your child in English and Spanish. For each of the statements I read please indicate whether your child would be able to carry out each task "quite easily", "with some difficulty", or "with great difficulty or not at all."

	"Can do"	Quite easily	With some difficulty	With great difficulty
Speaking ability	Say the days of the week			
	Order a simple meal in a restaurant			
	Give simple biographical information about myself			
	Describe my present studies or other major life activities accurately and in detail			
Listening comprehension	Understand very simple statement or questions in the language ("hello", "what is your name")			
	On the telephone, understand a native speaker who is speaking to me slowly and carefully			
	In face-to-face conversation with a native speaker who is speaking slowly and carefully to me, tell whether the speaker is referring to past, present or future events.			
	Understand movies without subtitles			
	Understand two native speakers when they are talking rapidly with one another			
Reading proficiency	Read personal letters or notes written to you in which the writer has deliberately used simple words and constructions.			
	Read, on store fronts, the type of store or the services provided (e.g. "dry cleaning, "book store")			
	Understand newspapers headlines			
	Read popular novels without using a dictionary			

e) Now I will ask you about your language ability in English and Spanish. Read same table as above.

III. Home-school communication

a) In your opinion, what role does education play in the life of your child(ren)? Do you think there are specific advantages of attending school? If so, which ones?
b) What do you think is your role in your children's education?
c) How often are you invited to school meetings? How often do you attend these meetings?
d) How often do you receive information about the performance of your children? In which format and language? (periodic informal communications, telephone, monthly parent meetings, biweekly newsletters, etc.)?

e) Do you know your child's teachers? Do you know the school principal? Do you know the administrative staff of the school? Do you feel comfortable talking to them?
f) Does the teacher or aides speak to you in Spanish if needed?
g) Does the teacher provide you with helpful information to support and guide your children through the educational process? If so, how is the information provided (handouts, informal talks, workshops, etc)? Have you find that information useful?
h) Has the teacher talked to you about cultural differences between American culture and Hispanic culture?
i) Do you participate in any school committee or extracurricular activities? Which ones?

IV. Student's Performance
a) In your perception, how well would say that your children perform at school?
b) Do you supervise or help your son/daughter to do homework? If so, how often? If not, what prevents you from doing it?
c) Are there any specific subjects in which your child(ren) is/are struggling? If so, what do you think are the main reasons for that?
d) In your perception, does the school/teacher incorporate elements of your culture in the curricula (e.g. incorporation of national festivities, recognition of cultural differences among students, etc)?
e) In your opinion, how would grade you the support your child receives from school to succeed academically? Please talk about the support your child receives from teachers, the principal and any specific language or after school programs, if applicable

V. Social Integration and community involvement
a) Where do your friends come from?
b) Where do your child's friends come from?
c) Are you friends with other parents from your child's school?
d) Is your child friends with their classmates (Hispanic and non-Hispanic)?
e) Do you belong to any social group/organization in the community? If so, what type of organization? How did you get involved with it?
f) Are there community organizations or groups providing any type of services to Hispanic population? If so, tell me about it? Have you made use of the services offered?
g) Do you know of ESL classes offered to adults in the community? If so, have you ever made used of them?
h) In your perception, what are the main attitudes towards Hispanics in the community? Do you feel comfortable and accepted by the community? In which aspects more than in others?

VI. Socio-demographic questions
a) Years of formal education
b) Type of family (single-headed or both parents)

c) Occupation here and in country of origin:

I finish my questions. Is there anything else that you would like to add or comment on? Thanks for your cooperation!

B.2 TEACHERS

I. Teacher's background
   a) How long have you been a teacher? How long have you been a teacher in this school? Which subjects/grades do you teach?
   b) What is your academic background or degree?
   c) Do you have teaching certifications? Do you have any certification for teaching English Language Learners?

II. Teaching Hispanics
   a) For how long have you been teaching students of Hispanic origin?
   b) In your experience, have you identified educational needs specific to this group? Could you please talk about them?
   c) Have you received any training to better teach this group? If so, what type of training (in-school, ESL conference, other)?
   d) Do you incorporate cultural elements relevant to your language minority students into the curricula?
   e) How would you describe the achievement of Hispanics as a group? As a teacher, are your expectations for Hispanic students the same as your expectations for other students?
   f) How do you monitor students' progress? How often do you provide immediate feedback on assignments given to students?
   g) In your experience, what would you say are the main factors affecting achievement –either poor or high- of this group (e.g. school related, family, previous schooling experience, etc.)?
   h) In your teaching experience, what would you say are effective strategies to enhance performance of minority students? What do you think are the major challenges to provide quality education to this group?
   i) How would you characterize your teaching style? How would you grade your teaching abilities?

III. Language program

a) Does the school use a specific program to teach minority language students (e.g. ESL, structured immersion, TBE, etc.)?
   - If so, what is the purpose of that program and how is it implemented?
   - If not, what strategies are implemented within the classroom to better assist minority language students?

b) Are students separated during classes or by subject? Are students grouped within classes depending on their level of proficiency in English?

c) Do you speak Spanish? Does the school provide you with aides that speak Spanish?

d) What would you need to make your teaching more effective for this group (Hispanics)?

e) In your opinion, what is the relation between dominion of English and achievement? What is the relation between Spanish literacy and performance?

IV. Home-school communication

a) In your opinion, what is the role that parents play in their children's education?

b) How often do you have school meetings with parents? In general, how is parent's attendance at these meetings? Specifically, how is the attendance of Hispanic parents?

c) How often do you provide parents with information on the performance of their children? Which format do you use more frequently? (periodic informal communication, telephone, monthly parent meetings, biweekly newsletters, etc)

d) Are Hispanic parents notified about their children's performance in Spanish, if necessary? Do you speak Spanish or have aides that speak that language? Does the school offer any advice /courses to parents on strategies to better help their children at school?

e) Do you know the parents of all your Hispanic students? How is your relationship with them?

f) Do you talk to the parents of your minority students about cultural differences/values in both American and Latin-American culture?

g) Are there any specific strategies implemented by this school to reach and involve more actively parents of language minority students? If so, could you please talk about them?

V. Social integration and community involvement

a. In your perception, do Hispanic students mingle with non-Hispanic peers?

b. Do you perceive any tensions between ethnic groups? If so, what strategies have been implemented at classroom and school level to tackle this situation?

c. In your perception, do Hispanic parents socialize between them and with other parents?

d. Does the school organize activities to encourage social integration among parents? If so, which ones?

e. Are there organizations/groups oriented to serve the Hispanic population in the community? If so, what type of service is provided by these organizations? Does the school collaborate or communicate with them?
f. In your perception, have Hispanic families integrated into the community?

I finish my questions. Is there anything else that you would like to add or comment on? Thanks for your cooperation!

B.3 PRINCIPALS

I. Principal's background
a) Please, could you start by telling me how long you have been principal in this school? Did you teach at this school before becoming principal?
b) What is your professional background and degree?

II. School structure and goals
a) How would you characterize the student population of this school (e.g. demographic, socioeconomic, achievement, etc.)?
b) Based on these characteristics, what would you say are the main educational needs of your student population? How do the curricula and programs address these educational needs?
c) What would you consider the main goals of this school?
d) How would you characterize this school's staff (demographics, training, background, etc.)?

III. Teaching Hispanics
The main purpose of study is to learn about Hispanic students in Pennsylvania public schools. Because your school shows an important proportion of Hispanic-origin students enrolled, I would like to ask you some questions on this regard.

a) For how long has this school been receiving a significant flow of Hispanic-origin students? Has this flow changed over the last decade? If so, why do you think this has occurred?

b) In your school, have you identified educational needs specific to Hispanics? If so, could you please talk about them? How is the education of Hispanic students linked/represented in the school agenda and goals?
c) Have you, the teachers of this school, and administrative staff received any training to better assist this group? If so, what type of training (in-school, ESL conference, other)? If not, would you consider it necessary and request it? Do teachers have bilingual aides?
d) Talking about Hispanic students, how would you describe their school achievement as a group? As principal of this school, are your expectations for Hispanic students the same as your expectations for other ethnic groups?
e) In your experience, what would you say are the main factors influencing achievement of Hispanics?
f) In your experience, what do you think are the major challenges that your school has faced in trying to enhance the performance of this group? What strategies, if any, would you consider most effective to provide quality schooling to this group?

IV. Language program

a) Does the school use a specific program to teach minority language students if necessary (e.g. ESL, structured immersion, TBE)? If so, how does the school classify students to be eligible for a language program?
   - What is the purpose of that program and how is implemented? Where do the resources come from?
   - Are students separated depending on the level of English proficiency? How does the school deal with students that are illiterate in both languages?
   - Do teachers serving Hispanic students speak Spanish? If not, do teachers have aides that speak Spanish?
   - In your opinion, what is the relation between dominion of English and achievement? What is the relation between Spanish literacy and performance?
b) In your opinion, would you say this school has adequate and sufficient resources to serve minority language students (both educational and financial)?
c) What criteria are used to exit students from language programs?
d) If no language program is offered, what strategies have been implemented to better assist minority language students?

VI. Home-school communication & participation

a) In your opinion, what is the role of parents in students' education and performance?
b) What types of activities are implemented to involve parents in students' education? How often does your school organize community activities to involve parents? In general, how is parent's attendance to these meetings? Specifically, how is the participation of Hispanic parents in these activities? If low, what do you think is the main reason?
c) How often does your school provide parents with information on the performance of their children?

d) Are there school staff members that speak Spanish? Are Hispanic parents notified about their children's performance in Spanish, if necessary?
e) Do you know the parents of your Hispanic students? How is your relationship with them?
f) Does the school collaborate with community organizations (e.g. health, after-school programs, or social services) that contribute to the general support for Hispanic families? If so, what type or organizations are? If not, what type of community organizations would help to enhance performance in the district's elementary schools?
g) Are there community organizations that offer ESL classes for adults? Does the school partner with them?

I finish my questions. Is there anything else that you would like to add or comment on?

Thanks for your cooperation!

APPENDIX C

CODE LIST BY FAMILY GROUP

Code family	Codes included	No. Quotations
Challenges	Biggest struggle as finding a job	1
	Budget constraints	8
	Mobility	5
	Low parental involvement	28
	Challenges related to poverty	16
	Poor background knowledge	16
	Biggest challenge	16
	Shortage of ESL resources	12
	Learning disabilities	6
	Language barrier with students	1
	Language barrier with parents	26
	Mental health problems	16
	Pressure on high achievement related to accountability	2
Differences between Hispanics	Divisions by country of origin	15
	Food processing employees	1
	Separate group	1
	Irresponsible parents	1
	Stereotypes associated to national origin	5
	Subcultures	8
	We are all the same	1
	Work ethic and dependence on government welfare	6
ELA program	ELA teacher responsibilities	3
	Background of ELA teachers	4
	ELA program implementation	12
	PSSA operation	4
	Additional language tests	6
	WIDA	3

Code family	Codes included	No. Quotations
Home-school partnership	Home-school communication	11
	Home-school partnership	10
	Value in being involved	13
Migration dynamics	Coethnic friendships	2
	Communication	1
	Community sense	3
	Community integration	13
	Desire of more integration	1
	Disagreement as violence trigger	1
	Family as main social nucleous	2
	Kin networks	3
	No discrimination	2
	Racism and minorities	4
	Social integration	2
	Social isolation	8
	Violent atmosphere	6
	Social role of schools	4
Monitoring system	Active use of data	10
	Constant monitoring and testing	12
Parental involvement	Attendance to activities/conferences	9
	Attendance linked to obligation	1
	Parental involvement in homework	3
	Parents afraid of coming in to school	6
Parents suggestions	Desire of greater community integration	3
	Modify time assigned for school activities	1
	Opinion about school	8
	Suggestions to improve school services	7
Schools' operation	Principal's main approach	8
	School's improvement plan	3
	School's main goal	2
	School's open door to parents	2
	School's specific needs/ characteristics	16
	School demographics	6
	School partnerships	4
	School self-efficacy	1
	Understanding approach to family issues	3
	Coethnic friendships	2
	Communication	1
	Community	3
	Desire of greater community integration	1
	Disagreement as violence trigger	1
	Family as main social nucleus	2
	Kin networks	3
	No discrimination	2
	Parent outreach role	3
	Racism ad minorities	2
	Social integration in the community	17

Code family	Codes included	No. Quotations
Social integration	Social isolation	2
	Subcultures	8
	Violent atmosphere	6
	Social Agency role	4
	Work ethic and dependence on government assistance	6
Social and education services	Services-knowledge of ESL classes	8
	Services-knowledge of US. Health System	3
	Services-Knowledge of Hispanic center	3
	Services-Knowledge of Migrant program	4
	Services-Knowledge of Welfare system	6
Students' performance	High student performance	3
	Newcomers vs U.S. born	4
	Performance according to parents	15
	Struggling at school	6
Values on education	Education as being a good man	1
	Education as moral learning	4
	Education as shared responsibility	3
	Education to go further than parents	1
	Expectations for a better life	4
	Material differences btw U.S. and LA schools	2
	Moral learning as education	1
	Non-authoritative parents	1
	Omnipresence to avoid misconduct	1
	Proactive approach to education	2
	Value in education	11
	Worried about bullying	2
Values on language	Risks associated to losing Spanish	2
	Bilingual mother	2
	Bilingual as beneficial (overall)	3
	Bilingualism for becoming interpreter	3
	Bilingualism linked to ability to help	3
	Bilinguialism to get a better job	6
	Language status and value	12
	Learning English as an obligation	1
	Openness and willingness to speak English	4
	English predominance	5
	Spanish at home, English at school	3
	Spanish practice	2
	Spanish proficiency linked to achievement	2
	Spanish to communication bridge with kin	3
Values on being Hispanic	Hispanic descent as positive	2
	Proud of Hispanic heritage	1
	Spanish language as heritage	2
	Offspring's obligation to speak Spanish	2
	We are all the same	1

Code family	Codes included	No. Quotations
Effective strategies	Constant monitoring and testing	12
	Counseling approach	3
	Principal's goal oriented personality	3
	Help with academic tasks	2
	High expectations	1
	Leadership	2
	Love as fundamental part of teaching	1
	Non-determinism	1
	Order and discipline emphasis	8
	Persistent personality	2
	Role models	3
	School strategies	7
	Strategy sharing	1
	Strategy-limited support at home	11
	Strategy-joint planning and monitoring	4
	Strategy-understanding approach	1
	Strategy-parental involvement at school	13
	Strategy- cultural differences	5
	Strategy-ESL staff	1
	Strategy- individualized interventions	2
	Strategy- language development	13
	Strategy- most effective	2
	Strategy- mobility	3
	Teamwork and community effort	5
	Social agency role	4

APPENDIX D

TOTAL AND HISPANIC POPULATION IN PENNSYLVANIA COUNTIES

COUNTY NAME	Population 2010			Population 2000			Population change, 2000 to 2010			
	Total	Non-Hispanic	Hispanic	Total	Non-Hispanic	Hispanic	Total Change	Total Change (%)	Hispanic Change	Hispanic Change (%)
Forest County	7,716	7,298	418	4,946	4,886	60	2,770	56%	358	597%
Luzerne County	320,918	299,427	21,491	319,250	315,537	3,713	1,668	1%	17,778	479%
Clearfield County	81,642	79,735	1,907	83,382	82,911	471	-1,740	-2%	1,436	305%
Lackawanna County	214,437	203,755	10,682	213,295	210,337	2,958	1,142	1%	7,724	261%
Franklin County	149,618	143,180	6,438	129,313	127,045	2,268	20,305	16%	4,170	184%
Carbon County	65,249	63,104	2,145	58,802	57,944	858	6,447	11%	1,287	150%
Schuylkill County	148,289	144,209	4,080	150,336	148,665	1,671	-2,047	-1%	2,409	144%
Monroe County	169,842	147,554	22,288	138,687	129,492	9,195	31,155	22%	13,093	142%
Fulton County	14,845	14,722	123	14,261	14,209	52	584	4%	71	137%
Wyoming County	28,276	27,839	437	28,080	27,893	187	196	1%	250	134%
Wayne County	52,822	51,006	1,816	47,722	46,911	811	5,100	11%	1,005	124%
Montgomery County	799,874	765,641	34,233	750,097	734,797	15,300	49,777	7%	18,933	124%

COUNTY NAME	Population 2010			Population 2000			Population change, 2000 to 2010			
	Total	Non-Hispanic	Hispanic	Total	Non-Hispanic	Hispanic	Total Change	Total Change (%)	Hispanic Change	Hispanic Change (%)
Cumberland County	235,406	228,958	6,448	213,674	210,791	2,883	21,732	10%	3,565	124%
Pike County	57,369	52,196	5,173	46,302	43,987	2,315	11,067	24%	2,858	123%
Columbia County	67,295	65,946	1,349	64,151	63,542	609	3,144	5%	740	122%
Northumberland County	94,528	92,275	2,253	94,556	93,515	1,041	-28	0%	1,212	116%
York County	434,972	410,575	24,397	381,751	370,455	11,296	53,221	14%	13,101	116%
Clinton County	39,238	38,801	437	37,914	37,709	205	1,324	3%	232	113%
Lebanon County	133,568	121,158	12,410	120,327	114,358	5,969	13,241	11%	6,441	108%
Indiana County	88,880	87,933	947	89,605	89,148	457	-725	-1%	490	107%
Lehigh County	349,497	283,882	65,615	312,090	280,209	31,881	37,407	12%	33,734	106%
Tioga County	41,981	41,544	437	41,373	41,159	214	608	1%	223	104%
Mifflin County	46,682	46,148	534	46,486	46,223	263	196	0%	271	103%
Washington County	207,820	205,454	2,366	202,897	201,727	1,170	4,923	2%	1,196	102%
Warren County	41,815	41,510	305	43,863	43,712	151	-2,048	-5%	154	102%
Chester County	498,886	466,383	32,503	433,501	417,375	16,126	65,385	15%	16,377	102%
Susquehanna County	43,356	42,792	564	42,238	41,953	285	1,118	3%	279	98%
Delaware County	558,979	542,442	16,537	550,864	542,496	8,368	8,115	1%	8,169	98%
PerryCounty	45,969	45,381	588	43,602	43,301	301	2,367	5%	287	95%
Lycoming County	116,111	114,552	1,559	120,044	119,245	799	-3,933	-3%	760	95%
Montour County	18,267	17,943	324	18,236	18,069	167	31	0%	157	94%
Bucks County	625,249	598,467	26,782	597,635	583,630	14,005	27,614	5%	12,777	91%
Butler County	183,862	181,921	1,941	174,083	173,067	1,016	9,779	6%	925	91%
Fayette County	136,606	135,557	1,049	148,644	148,080	564	12,038	-8%	485	86%
Blair County	127,089	125,859	1,230	129,144	128,482	662	-2,055	-2%	568	86%
Berks County	411,442	344,087	67,355	373,638	337,281	36,357	37,804	10%	30,998	85%
Adams County	101,407	95,292	6,115	91,292	87,969	3,323	10,115	11%	2,792	84%
Dauphin County	268,100	249,305	18,795	251,798	241,394	10,404	16,302	6%	8,391	81%

COUNTY NAME	Population 2010			Population 2000			Population change, 2000 to 2010			
	Total	Non-Hispanic	Hispanic	Total	Non-Hispanic	Hispanic	Total Change	Total Change (%)	Hispanic Change	Hispanic Change (%)
Snyder County	39,702	39,045	657	37,546	37,178	368	2,156	6%	289	79%
Bradford County	62,622	61,920	702	62,761	62,363	398	-139	0%	304	76%
Lawrence County	91,108	90,177	931	94,643	94,114	529	-3,535	-4%	402	76%
Potter County	17,457	17,276	181	18,080	17,977	103	-623	-3%	78	76%
Northampton County	297,735	266,556	31,179	267,066	249,198	17,868	30,669	11%	13,311	74%
Bedford County	49,762	49,312	450	49,984	49,721	263	-222	0%	187	71%
Allegheny County	1,223,348	1,204,278	19,070	1,281,666	1,270,500	11,166	-58,318	-5%	7,904	71%
Westmoreland County	365,169	361,990	3,179	369,993	368,124	1,869	-4,824	-1%	1,310	70%
Juniata County	24,636	24,013	623	22,821	22,452	369	1,815	8%	254	69%
Lancaster County	519,445	474,515	44,930	470,658	443,916	26,742	48,787	10%	18,188	68%
Centre County	153,990	150,300	3,690	135,758	133,515	2,243	18,232	13%	1,447	65%
Venango County	54,984	54,506	478	57,565	57,267	298	-2,581	-4%	180	60%
Somerset County	77,742	76,902	840	80,023	79,491	532	-2,281	-3%	308	58%
McKean County	43,450	42,693	757	45,936	45,451	485	-2,486	-5%	272	56%
Mercer County	116,638	115,390	1,248	120,293	119,490	803	-3,655	-3%	445	55%
Erie County	280,566	271,048	9,518	280,843	274,717	6,126	-277	0%	3,392	55%
Crawford County	88,765	87,942	823	90,366	89,829	537	-1,601	-2%	286	53%
Beaver County	170,539	168,541	1,998	181,412	180,097	1,315	-10,873	-6%	683	52%
Cambria County	143,679	141,673	2,006	152,598	151,246	1,352	-8,919	-6%	654	48%
Jefferson County	45,200	44,925	275	45,932	45,744	188	-732	-2%	87	46%
Philadelphia County	1,526,006	1,338,395	187,611	1,517,550	1,388,622	128,928	8,456	1%	58,683	46%
Union County	44,947	42,601	2,346	41,624	40,002	1,622	3,323	8%	724	45%
Clarion County	39,988	39,743	245	41,765	41,593	172	-1,777	-4%	73	42%
Huntingdon County	45,913	45,186	727	45,586	45,062	524	327	1%	203	39%
Greene County	38,686	38,221	465	40,672	40,315	357	-1,986	-5%	108	30%
Elk County	31,946	31,763	183	35,112	34,970	142	-3,166	-9%	41	29%

COUNTY NAME	Population 2010			Population 2010			Population change, 2000 to 2010			
	Total	Non-Hispanic	Hispanic	Total	Non-Hispanic	Hispanic	Total Change	Total Change (%)	Total Change	Total Change (%)
Sullivan County	6,428	6,336	92	6,556	6,484	72	-128	-2%	20	28%
Armstrong County	68,941	68,575	366	72,392	72,084	308	-3,451	-5%	58	19%
Cameron County	5,085	5,066	19	5,974	5,940	34	-889	-15%	-15	-44%

Notes: Population counts for 2010 are tabulated from P.L. 94-171 Summary Files released by the Census Bureau beginning in February 2011 (http://www.census.gov/rdo/data/2010_census_redistricting_data_pl_94-171_summary_files.html). Population data for 2000 are the April 1, 2000 base for the vintage 2009 county population estimates. They may differ from the 2000 Decennial Census counts because of post-enumeration corrections and boundary changes.
Source: Pew Hispanic Center

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